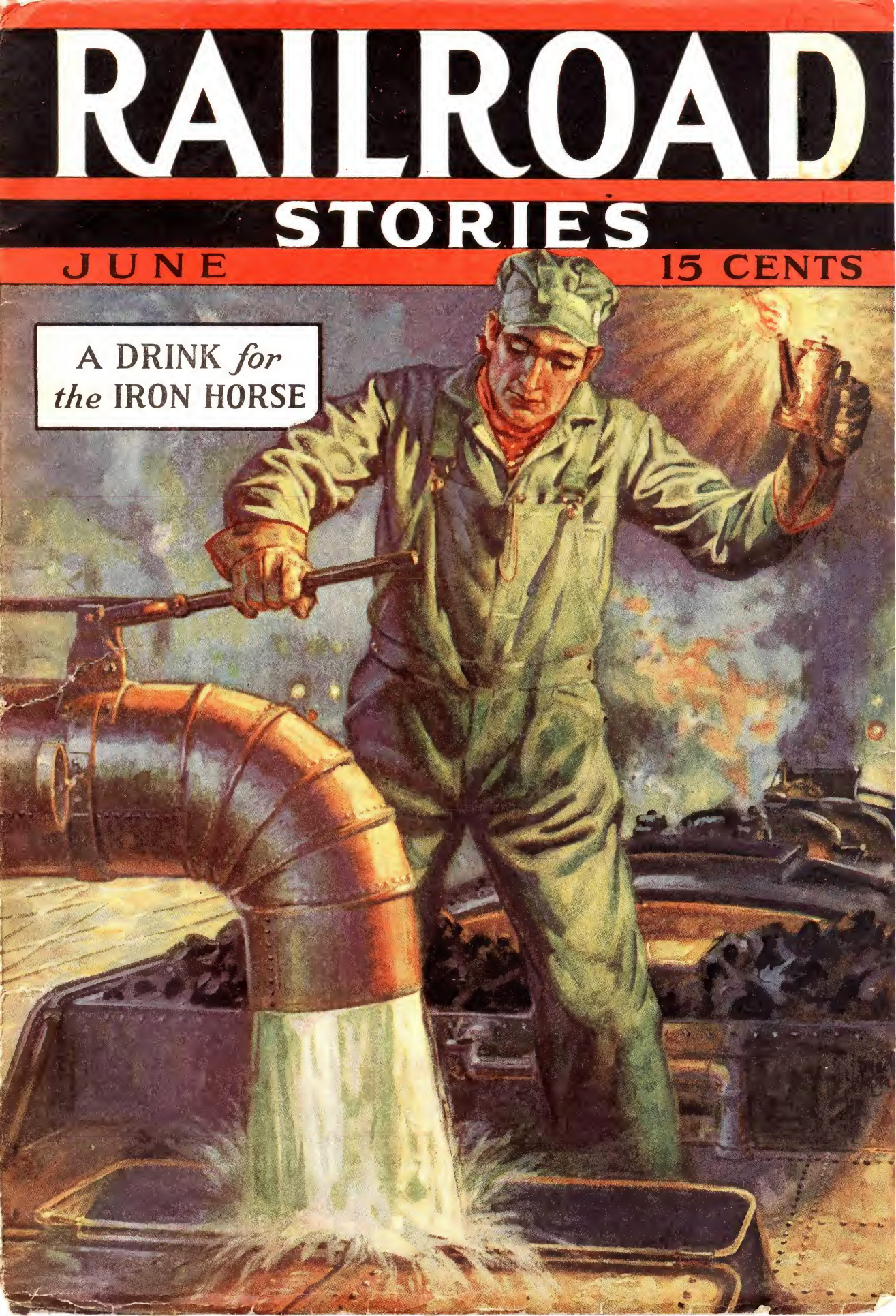
RAILROAD STORIES

JUNE

15 CENTS



So he nailed the chair to the floor

HIS sense of humor suggested it. But he really did it in self-defense; as a safeguard against that ever-present, eager type of salesman who pulls his chair up close, talks right into your face—and, too often, is an offender in the matter of halitosis (unpleasant breath). You know the kind. Most of the time, these well-meaning fellows are not aware of it themselves. That's the insidious thing about halitosis.

Don't Take A Chance

Fortunately there is a way to overcome bad breath—the regular, systematic use of Listerine, the safe, liquid antiseptic and deodorant, used as a mouth wash and gargle. Keep Listerine Antiseptic always handy in your home and at your office; and use it before business and social calls. This way you may be sure you are on the safe—and polite—side; that your breath will offend neither a good customer nor a good friend.

Why Listerine Works

The fermentation of tiny food particles in the mouth is the major cause of bad breath. Listerine Antiseptic quickly halts such fermentation, then overcomes the odors it produces. After its use, the entire mouth feels fresh, clean, and invigorated; the breath purer, sweeter.

When you want to be sure, use only Listerine, with the antiseptic action so many mouth washes lack.

LAMBERT PHARMACAL COMPANY
St. Louis, Mo.

FOR HALITOSIS USE LISTERINE

We Clung to Life as Seas Broke Over Us

Four Hour Vigil Ends June Sailing Party

"It was a beautiful June evening with hours more of daylight ahead when I set out with two friends from the yacht club for an early evening cruise," writes Bill Dye, of Shaker Heights, Cleveland, Ohio.

"The sky clouded over and darkness fell early. Not having our regular running lights, we tied red and green paper over a couple of flashlights and lashed them to the mast.

"Then, without warning a terrific squall hit us, capsized the boat, left us clinging for our lives to the slippery bottom while the seas broke over us.

"We could see the two flashlights shining under the water and I managed to retrieve one of them. We tied a line around it so that when the waves broke over us, it wouldn't be lost, and then for four long, weary hours took turns waving it toward the shore a mile and a half away.

"Finally, our rescuer who saw the light from the shore, was able to launch a boat. So you see it was the power of the *fresh* DATED 'Eveready' batteries in our flashlight that returned the three of us to the land of the living. I had used those batteries for months before this desperate adventure overtook us, so I know now the importance of flashlight batteries that are *fresh* when you buy them.

(*Signed*) W B Dye "

"EVEREADY" BATTERIES ARE *FRESH* BATTERIES

The DATE LINE guarantees FRESHNESS

NATIONAL CARBON CO., INC., 30 East 42nd Street, New York, N. Y.

RAILROAD STORIES

Formerly RAILROAD MAN'S MAGAZINE—*Title Registered in U. S. Patent Office*

JUNE, 1937 Vol. XXI, No. 7 *15 CENTS*

ILLUSTRATED FEATURES

When Boilers Blow Up . . . . . Stephen T. Weller 6
Peru's Railway Stamps . . . . . Winthrop S. Boggs 37
George Gould's Transcontinental Dream . . . . H. R. Edwards 38
The Fastest and Longest Fan Excursion 47
American Military Railroads . . . . . Lieut. Frank W. Ebey 48
Trains That Are Making Good (The Royal Blue) 85
Tinplaters and Such . . . . . C. F. Carter 90
Along the Iron Pike . . . . . Joseph Easley 126
The Locomotive Whistle Language 136

FICTION

Hogger's Boy (Novelette) . . . . . Ed Samples 16
Over the Sawlog . . . . . Clifford Sweet 64
Green Timber . . . . . G. A. Lathrop 98
Ready in Five Minutes . . . . . R. A. Snyder 122

TRUE TALES

Boomer's Luck . . . . . "Silent Slim" Roach 74
Hogheads Extraordinary . . . . . "Turkey" Moore 78
My Parlor-Car Home . . . . . Rev. Calvin J. Graves 81

POPULAR DEPARTMENTS

By the Light of the Lantern 56
The Sunny Side of the Track 72
Model Engineers and Clubs 94
Santa Fe Locomotives . . 113
The Boomer Trail 116
Motive Power in Peru 120
On the Spot 127
International Engine Picture Club 137

THE FRANK A. MUNSEY COMPANY, Publisher, 280 Broadway, New York, N. Y.

WILLIAM T. DEWART President

MESSAGERIES HACHETTE
3, La Belle Sauvage, Ludgate Hill, London, E.C.4

PARIS: HACHETTE & CIE.
111 Rue Réaumur

Published every month and copyright, 1937, by The Frank A. Munsey Company. Single copy, 15 cents. By the year, $1.50 in United States, its dependencies, Mexico and Cuba; Canada, $1.75. Other countries, $3.00. Currency should not be sent unless registered. Remittances should be made by check, express money order or postal money order. Entered as second class matter November 15, 1929, at the post office, New York, N. Y., under the Act of March 3, 1879. Entire contents protected by copyright; must not be reprinted without publisher's permission. Copyrighted also in Great Britain. Printed in U.S.A.

Manuscripts submitted to this magazine should be accompanied by sufficient postage for their return if found unavailable. The publisher can accept no responsibility for return of unsolicited manuscripts.

ON SALE THE FIRST OF EACH MONTH PRECEDING DATE OF ISSUE

THIS EMPTY MEANS

It takes brain to earn money—trained brain! The man without training is usually the man without cash. You can train your brain! Thousands of men have done it through spare-time study of I. C. S. Courses. Be a cash man—be a trained man—mail this coupon!

INTERNATIONAL CORRESPONDENCE SCHOOLS

BOX 2198-F, SCRANTON, PENNA.

★ Without cost or obligation, please send me a copy of your booklet, "Who Wins and Why," and full particulars about the subject *before* which I have marked X. ★

TECHNICAL AND INDUSTRIAL COURSES

☐ Architect
☐ Architectural Draftsman
☐ Building Estimating
☐ Contractor and Builder
☐ Structural Draftsman
☐ Structural Engineer
☐ Management of Inventions
☐ Electrical Engineer
☐ Electric Lighting
☐ Welding, Electric and Gas
☐ Reading Shop Blueprints
☐ Heat Treatment of Metals
☐ Sheet Metal Worker
☐ Boilermaker
☐ Telegraph Engineer
☐ Telephone Work ☐ Radio
☐ Mechanical Engineering
☐ Mechanical Draftsman
☐ Machinist ☐ Toolmaker
☐ Patternmaker
☐ Diesel Engines
☐ Aviation Engines
☐ Automobile Mechanic
☐ Refrigeration
☐ Plumbing ☐ Steam Fitting
☐ Heating ☐ Ventilation
☐ Air Conditioning
☐ Steam Engineer
☐ Steam Electric Engineer
☐ Marine Engineer ☐ Mail Carrier
☐ R. R. Locomotives
☐ R. R. Section Foreman
☐ Air Brakes ☐ R. R. Signalmen
☐ Highway Engineering
☐ Civil Engineering
☐ Surveying and Mapping
☐ Bridge Engineer
☐ Bridge and Building Foreman
☐ Chemistry
☐ Pharmacy
☐ Coal Mining
☐ Mine Foreman ☐ Fire Bosses
☐ Navigation
☐ Cotton Manufacturing
☐ Woolen Manufacturing
☐ Agriculture
☐ Fruit Growing
☐ Poultry Farming

BUSINESS TRAINING COURSES

☐ Business Management
☐ Industrial Management
☐ Traffic Management
☐ Accountancy
☐ Cost Accountant
☐ C. P. Accountant
☐ Bookkeeping
☐ Secretarial Work
☐ Spanish
☐ French
☐ Salesmanship
☐ Advertising
☐ Service Station Salesmanship
☐ First Year College Subjects
☐ Business Correspondence
☐ Stenography and Typing
☐ Civil Service
☐ Railway Mail Clerk
☐ Grade School Subjects
☐ High School Subjects
☐ College Preparatory
☐ Illustrating
☐ Cartooning
☐ Lettering Show Cards ☐ Signs

DOMESTIC SCIENCE COURSES

☐ Home Dressmaking
☐ Professional Dressmaking and Designing
☐ Advanced Dressmaking
☐ Millinery
☐ Tea Room and Cafeteria Management, Catering
☐ Foods and Cookery

Name.....*Age*.....*Address*.....

City.....*State*.....*Present Position*.....

If you reside in Canada, send this coupon to the International Correspondence Schools Canadian, Limited, Montreal, Canada

IVER JOHNSON

AMERICA'S FINEST *and* MOST POPULAR

Bicycles

for Boys, Girls Men *and* Women

Send for folder 208

$27.50 UP

IVER JOHNSON'S ARMS & CYCLE WORKS
63 River Street, Fitchburg, Mass.

New York 85 Chambers St. | San Francisco 731 Market St. | Montreal Coristine Bldg.

ITCH

OF ECZEMA, RASHES AND OTHER EXTERNALLY CAUSED SKIN TROUBLES

STOPPED QUICKLY

Use D.D.D. Prescription

AT ALL DRUGGISTS 35c - 60c - $1.00

TYPEWRITER ½ Price

Easy Terms
Only 10c a Day

Save over ½ on all standard office models. Also portables at reduced prices.

SEND NO MONEY

All late models completely refinished like brand new. FULLY GUARANTEED. Big free catalog shows actual machines in full colors. Lowest prices. Send at once. Free course in typing included.

13-day Trial

International Typewriter Exch. 231 W. Monroe St. Dept. 536 Chicago

MANY NEVER SUSPECT CAUSE OF BACKACHES

This Old Treatment Often Brings Happy Relief

Many sufferers relieve nagging backache quickly, once they discover that the real cause of their trouble may be tired kidneys.

The kidneys are Nature's chief way of taking the excess acids and waste out of the blood. Most people pass about 3 pints a day or about 3 pounds of waste.

Frequent or scanty passages with smarting and burning shows there may be something wrong with your kidneys or bladder.

An excess of acids or poisons in your blood, when due to functional kidney disorders, may be the cause of nagging backache, rheumatic pains, lumbago, leg pains, loss of pep and energy, getting up nights, swelling, puffiness under the eyes, headaches and dizziness.

Don't wait! Ask your druggist for Doan's Pills, used successfully by millions for over 40 years. They give happy relief and will help the 15 miles of kidney tubes flush out poisonous waste from your blood. Get Doan's Pills.

LAW STUDY AT HOME

Legally trained men win higher positions and bigger success in business and public life. They command respect. Greater opportunities now than ever before. Big corporations are headed by men with legal training.

More Ability: More Prestige: More Money

We guide you step by step. You can train at home during spare time. Degree of LL. B. conferred. Successful graduates in every section of the United States. We furnish all text material, including fourteen-volume Law Library. Low cost, easy terms. Get our valuable 64-page "Law Training for Leadership" and "Evidence" books FREE. Send for them NOW.

LaSalle Extension University, Dept. 658-L Chicago

Free For Asthma

If you suffer with those terrible attacks of Asthma at this season of the year; if you choke and gasp for breath don't fail to send at once for a free trial of a remarkable method. No matter where you live nor what your age or occupation nor whether you have any faith in any remedy under the Sun, send for this free trial. It will cost you nothing. Write now and test the method free on your own case. Address:

Frontier Asthma Co. 177-B Frontier Bldg.
462 Niagara Street, Buffalo, N. Y.

LIQUOR HABIT

Graves Home Treatment may be given with or without patient's knowledge. Send at once for

FREE TRIAL

and valuable descriptive booklet. No cost or obligation. Address **GRAVES LABORATORIES Inc., 50 W. Jackson, Dep't MSL, Chicago, Ill.**

Classified Advertisements

AGENTS AND SALESMEN

SELL NEW AND USED CLOTHING! 100%—300% profit. Selling experience unnecessary. We start you furnishing everything. Catalogue free.
ACME MERCHANDISE, AK-558 W. Roosevelt, Chicago.

AMAZING CLEANER saves time, labor, soap. Cleans and whitens clothes without rubbing. Removes spots and stains like magic. Sells 25c—profit 17c. Sample Free. BESCO, 5009-H, Irving Park, Chicago.

SELL NOTHING! $95.00 WEEKLY.
$500,000 punchboard firm announces new, no investment plan. SEASON STARTING.
K&S, 4329 Ravenswood, Dept. C394, Chicago.

MALE HELP WANTED

STEADY WORK—GOOD PAY. Reliable man wanted to call on farmers. No experience or capital required. Pleasant work. Home every night. Make up to $12 a day. Wonderful new proposition. Particulars Free. Write McNESS Co., Dept. 52, Freeport, Illinois.

MODEL MAKING

Used and new TINPLATE. Also "O" Gauge 1¼" scale merchandise. 10c brings a copy of our monthly list. Lowest Prices.
NATIONAL TRAIN EXCHANGE
293 N. Western Ave., Elkhurst 4834, St. Paul, Minn.

Build a Model Railroad in 00 Gauge (¾ inch between rails). A Complete catalogue of parts, construction kits, and completed units. One dime. Nason Railways, Dept. R-6. P. O. Box 9. Mt. Vernon, N. Y.

RAIL, RUST-PROOF, SUITABLE FOR ½", ¾" OR 1" SCALE TRACK. GENEROUS SAMPLE OF RAIL, SPIKES, AND JOINTS, 25C (COIN) PREPAID. LITTLE ENGINES, BOX C-15, WILMINGTON, CALIF.

OLD GOLD AND DIAMONDS

WANTED—OLD GOLD, DIAMONDS
MAIL us your old gold teeth—old or broken jewelry—antiques—watches—diamonds—silver. Cash by return mail. Goods returned in 10 days if you're not satisfied.
OHIO SMELTING CO., INC.
315-A Hippodrome Bldg., Cleveland, Ohio

PATENTS OR INVENTIONS

INVENTIONS COMMERCIALIZED. Patented or Unpatented. Send sketch and description of model, or write for information. In business 30 years. Complete facilities. Adam Fisher Company, 249 Enright, St. Louis, Mo.

WRITERS

WANTED: NEW WRITERS! Earn while learning! Write for magazines, books, newspapers. FREE literature!
U. S. SCHOOL OF WRITING
Dept. M 20 West 60 St. New York City

$1 Brings your Choice of these WATCHES

10 MONTHS TO PAY · 10 DAYS TRIAL · MONEY BACK GUARANTEE

P24—Ladies' newest round style Kent watch; 7 jewels; a bargain.
$1.50 a month

Convince yourself that these watches are exceptional value. Wear your choice for 10 days at our expense. If not satisfied, return and we will refund money. Put a dollar bill in envelope with name, address, number of watch wanted and a brief note stating age (must be over 20), occupation, employer and other facts about yourself. Information held strictly confidential. We will open a 10 month Charge Account and send the watch for your approval and trial. If satisfied, pay balance in ten equal monthly payments. SEND FOR FREE CATALOG.

L. W. SWEET, Inc.,
MAIL ORDER DIVISION OF FINLAY STRAUS
Dept. 717-E, 1670 BROADWAY, NEW YORK

K19—Curved watch for men; 7 jewel Kent movement. Newest style; guaranteed. Leather strap.
$1.50 a month

---

8 Shot BLANK REVOLVER DOUBLE ACTION — **4.95**

SAFE and HARMLESS

Ball Cartridges cannot be inserted; Shoots 22 blanks only. Construction and finish same as hi-grade firearms. No permit required. For starting races, theatricals, training dogs, etc.
8 Shot Blank Revolvers, double action 22 cal. **$4.95**
8 Shot Blank Revolvers, 22 cal. D. A., pearl stock **$5.95**
6 Shot Blank Automatic, 22 cal. jiffy ejector **$4.45**
100 Blanks FREE with each. Extra Cartridges, per 100 .50
$2 Deposit required on C. O. D.'s
Badges: Private Detective, Sheriff, Special Police, Private Watchman, Constable, etc. **Nickel 85c Gold Plte. $1.45**
Bargain Catalog: S&W, Colts, Rifles, Police Goods, Telescopes, Binoculars, Holsters, Belts, etc. Send 3c stamp.
LEE SALES CO. (Dept. MN) 35 W. 32nd St. NEW YORK CITY

Newly Discovered Hormone Helps Men Past 40

It's a hormone used by many doctors here and abroad to strengthen impaired vigor caused by weakened glands. This hormone, together with other beneficial ingredients, is obtained in Zo-ak Tablets (Blue Box for Men—Orange Box for Women) at all good druggists. Try them **uninterruptedly for one month.** If you do not feel vastly improved your druggist gives you your money back. Don't accept a cheaper substitute. Zo-ak contains the genuine gland-stimulating hormone. No harmful drugs. Booklet by registered physician free. **Zo-ak Co., 56B W. 45th St., N. Y.**

BE A PASSENGER Traffic Inspector

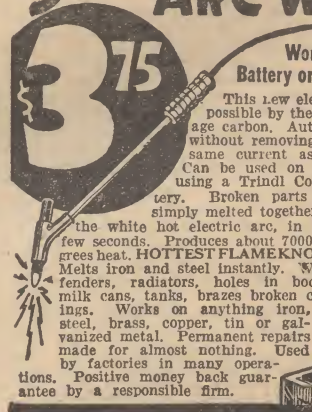
A Position is Ready for You—Men Needed NOW

Railway and Bus Lines are constantly asking for our trained graduates. Short, home-study course prepares you, and upon completion, we place you at up to $135 per mo. plus expenses to start, **or refund tuition.** Active Men—19 to 50 eligible. Write for the interesting story of Traffic Inspection. **STANDARD BUSINESS TRAINING INSTITUTE, Dept. 5006, Buffalo, N. Y.**

Trindl ELECTRIC ARC WELDER

3.75

Works Off Any Storage Battery or Ordinary Light Socket



This new electric arc welder is made possible by the invention of a low voltage carbon. Auto batteries may be used without removing from car. Uses about same current as four headlight bulbs. Can be used on electric light socket by using a Trindl Converter in place of battery. Broken parts are simply melted together by the white hot electric arc, in just few seconds. Produces about 7000 degrees heat. **HOTTEST FLAME KNOWN** Melts iron and steel instantly. Welds fenders, radiators, holes in bodies, milk cans, tanks, brazes broken castings. Works on anything iron, steel, brass, copper, tin or galvanized metal. Permanent repairs made for almost nothing. Used by factories in many operations. Positive money back guarantee by a responsible firm.

AGENTS
Men with cars to sell mechanics, repairmen, farmers, radio and battery shops, factories. Five minute demonstration makes sales. Up to 150% profit. Write today.

TRINDL PRODUCTS 2229-HL Calumet Av. **CHICAGO, ILL.**

RAISE GIANT FROGS

FREE BOOK

GOODMARKET! WE BUY!

Frog legs in big demand. Good prices the year round! Easy to ship!

WE BUY Sell to us in addition to others waiting markets! **Men & Women** see what others are doing. Small pond starts you. **Free book** explains unusual offer to beginners.

AMERICAN FROG CANNING CO., (Dept. 182-H) New Orleans, La.

The Model Railroader

Exclusively Model Railroading

Supplementary Plate of S-gnal Plans Included with This Issue

Sign Up Now, Model Railroaders!!

Have the trainmaster of *The Model Railroader* put you on the board for a year's run over the model railroad systems of the world. Each month this magazine brings you a full consist of news about this fascinating hobby. Full of gossip of miniature roads, pictures and drawings of layouts, rolling stock, and locomotives. Featuring model railroading exclusively from the brass hats down to the gandy dancers. Seniority from February, 1937, special model show number still available. Two dollars (anywhere in the Americas) gives you a green board for 12 monthly issues. (Sample, 20 cents in coin or in three or two cent stamps).

THE MODEL RAILROADER
7605 W. State St. Wauwatosa, Wis.

When Boilers Blow Up

By STEPHEN T. WELLER

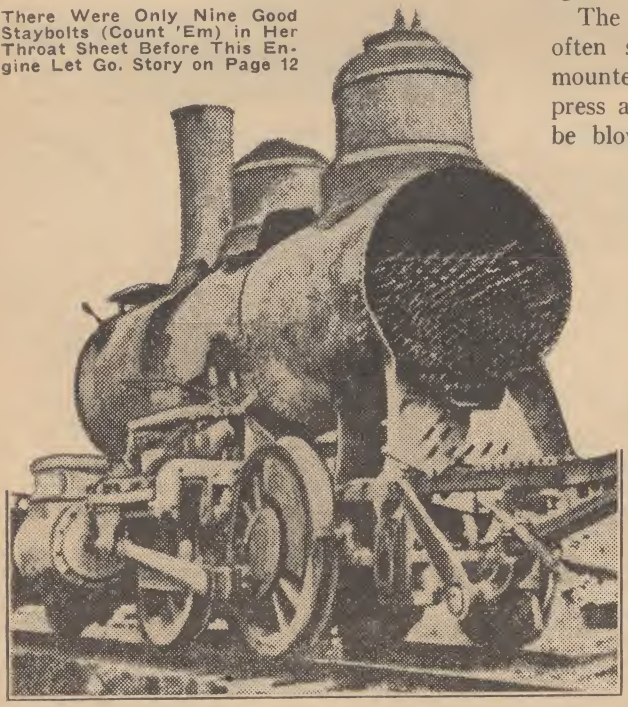
NINETY-ONE persons were killed in locomotive boiler explosions during 1912, whereas last year only ten lost their lives from this cause. Even on the railroads, where new records constantly are being made, that is something of a record. The story is simply one of education, better maintenance, and more conscientious work by all concerned.

The largest single reason for their existence, perhaps, is the effort of the Bureau of Locomotive Inspection of the Interstate Commerce Commission, whose 50 inspectors* are in the field investigating serious accidents and seeing that the complicated locomotive inspection law is enforced. When they slap a "Form Five" on an engine—the written order to tie up the machine until repaired—there is considerable stirring in the roundhouse. If several of them are handed out there may be a few new faces on the job—sometimes even a new master mechanic or often a new railway company inspector. Obviously, the fact that their engines may be examined by government men at any time is a great incentive for railroad officials to keep them free from defects.

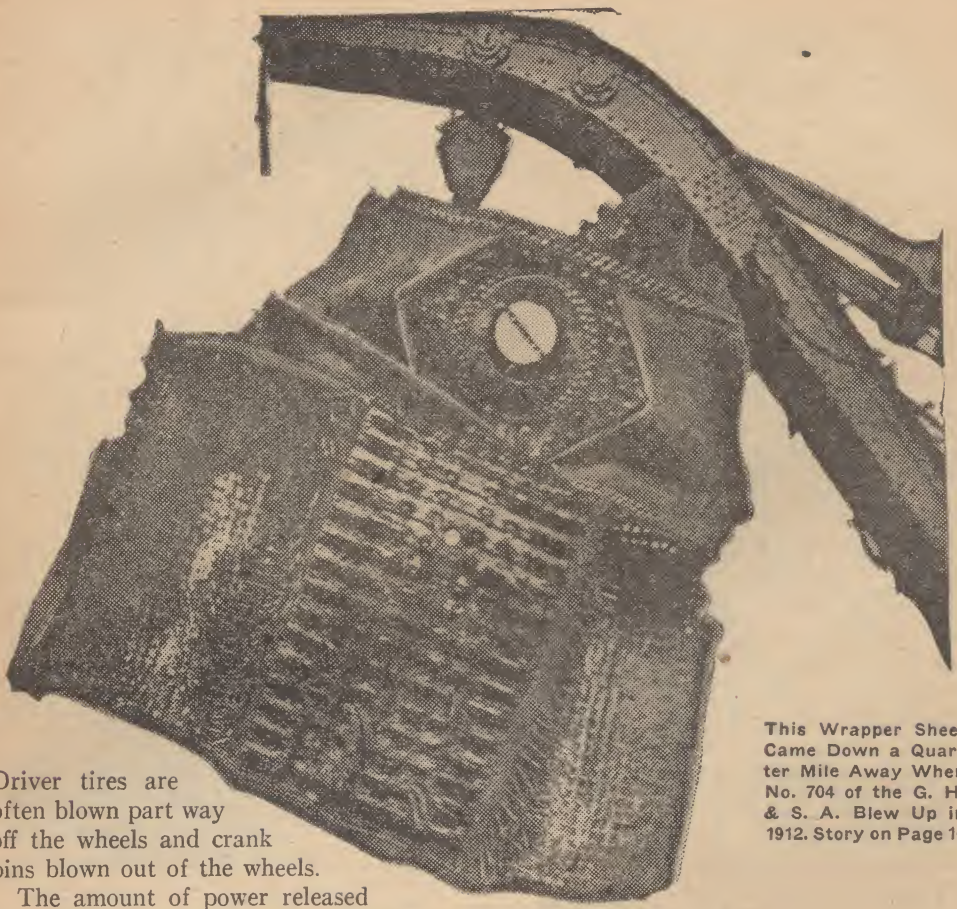
But the story of the explosions themselves—how and why and when they occur—is the interesting one. The public, and even most railroad men, don't realize the tremendous power stored in the hot water of a boiler. For it is not the steam, but the water which is converted into steam when the boiler rips open, which does the damage.

The force of a boiler explosion is often so great that driving wheels, mounted on their axles in a hydraulic press at a pressure of 200 tons, may be blown off the axles or the axles broken. Cases have been known in which the boiler was blown off and fell on the track a quarter of a mile ahead of the speeding train which hit it and piled up.

There Were Only Nine Good Staybolts (Count 'Em) in Her Throat Sheet Before This Engine Let Go. Story on Page 12



** Federal inspectors are civil service employees. Competitive examinations are held about once every six years and selection is made on merit. The applicant must have had at least six years experience on a railroad as machinist, boilermaker, engineer, boiler inspector, or mechanical department official; or eight years as fireman or railroad engine inspector. He must be between 28 and 55 years old (except if granted preference on account of military service). No educational requirements are mentioned, but the candidate must name former official-employers who will recommend him. The salary is $4,000 a year and traveling expenses, and it is necessary to travel over half the time. The last examination was held in September, 1936.*



This Wrapper Sheet Came Down a Quarter Mile Away When No. 704 of the G. H. & S. A. Blew Up in 1912. Story on Page 10

Driver tires are often blown part way off the wheels and crank pins blown out of the wheels.

The amount of power released in a boiler explosion may be judged thus: if a small locomotive type boiler, carrying 150 pounds pressure to the inch, explodes in two seconds, 240,000 horsepower will be released. If the boiler were filled entirely with steam at the same pressure and had no water in it, only 9,250 horsepower would be released. As we've already pointed out, most of the energy is stored in the hot water, about 15 per cent of which changes to steam when the pressure is released—steam which would occupy about 54,100 cubic feet. Which gives you an idea of the tremendous heat energy stored in a boiler.

The locomotive inspection law had its beginning in the Ashpan Act of Congress in 1908. From this humble beginning the bureau of locomotive inspection developed. This was an entering wedge of gradual extension of power of the Interstate Commerce Commission. The laws were not arbitrarily laid down, but were suggested and agreed upon by railroad officials themselves; and the limits of wear, time between washouts, procedure for inspection and tests, all represent good standard practice.

Before 1912 it was supposed that the railroads would maintain boilers and machinery to safe standards, and the Class I lines did have regulations substantially the same as the present inspection law; but they were regarded as something to *aim* at, and hence were violated at remote points on the system or at the option of local officials when rushed for power. By having a uniform law and central authority the standard for the smaller roads is brought up to that of the big fellows.

When established in 1912 the Bureau

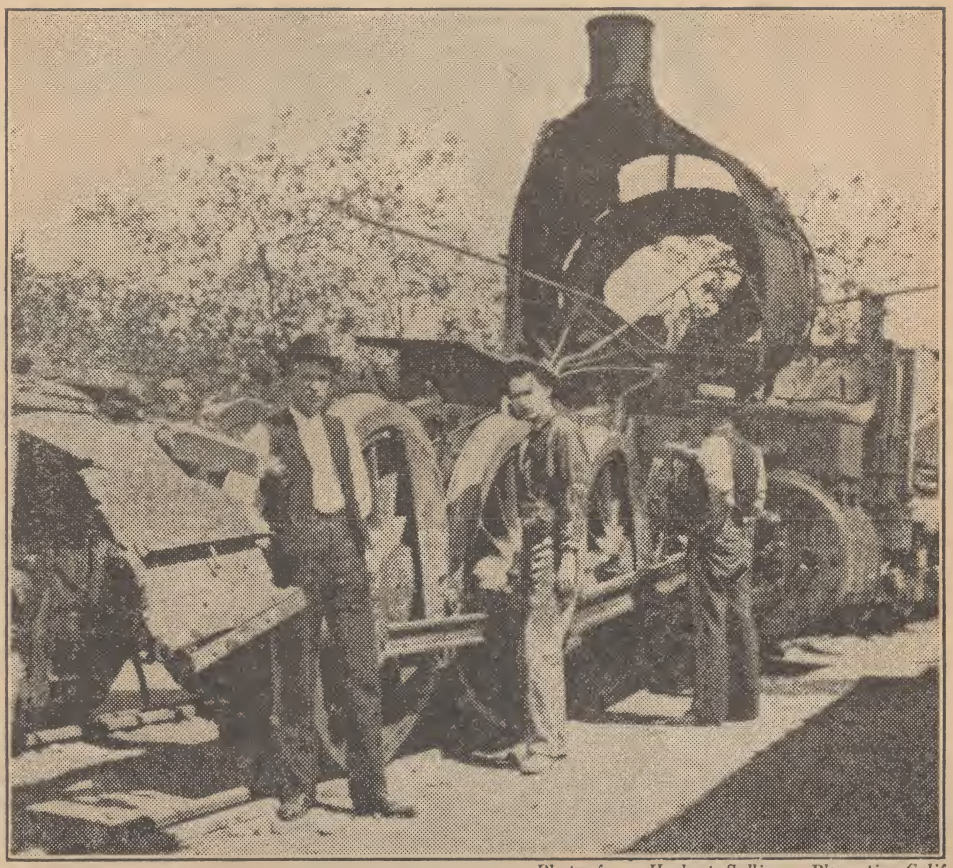


Photo from Herbert Sullivan, Placentia, Calif.

One of the Southern Pacific's 2600 Series Engines Was Pulling a Freight over the Tehachapi Mountains, Some Thirty Years Ago, When the Old Girl Went Up in the Air

began very systematically and thoroughly to establish standard practice for inspection and tests. Before this time it was not customary to give boilers a "hydro" (water pressure test) every year. Railroads were required to file with the Bureau specifications of all boilers, including date built, all dimension, strength of material, date of last removal of flues, and any alterations, including patches applied to shell. The inspection law gets right down to the bottom of the cause of boiler disasters. Even the chemical analysis of steel and tensile strength of stays and boiler plate are covered. The safety factor, incidentally, is four; that is, a boiler must not rupture (theoretically) until four times the working pressure is reached.

In the course of their duties the government men often noticed defects in wheels and other machinery which they reported, and which were usually promptly repaired. In a few cases railway officials pointed out that they had no jurisdiction over this machinery. Thanks to their pointing it out, the scope of the inspection law was presently enlarged by an act of Congress to include the entire locomotive and tender. The inspection law also covers locomotives other than steam.

The Bureau investigated boiler explosions exhaustively, with the idea of getting at the true cause rather than blaming it on anyone who may have been killed. Quite naturally, railroad officials often find it easiest to lay an explosion in which the enginemen have been killed to the enginemen themselves. But cases of crown sheet

failures that would have been ascribed to low water—man failures—before the day of federal inspection have been found to be due to bad water instead.

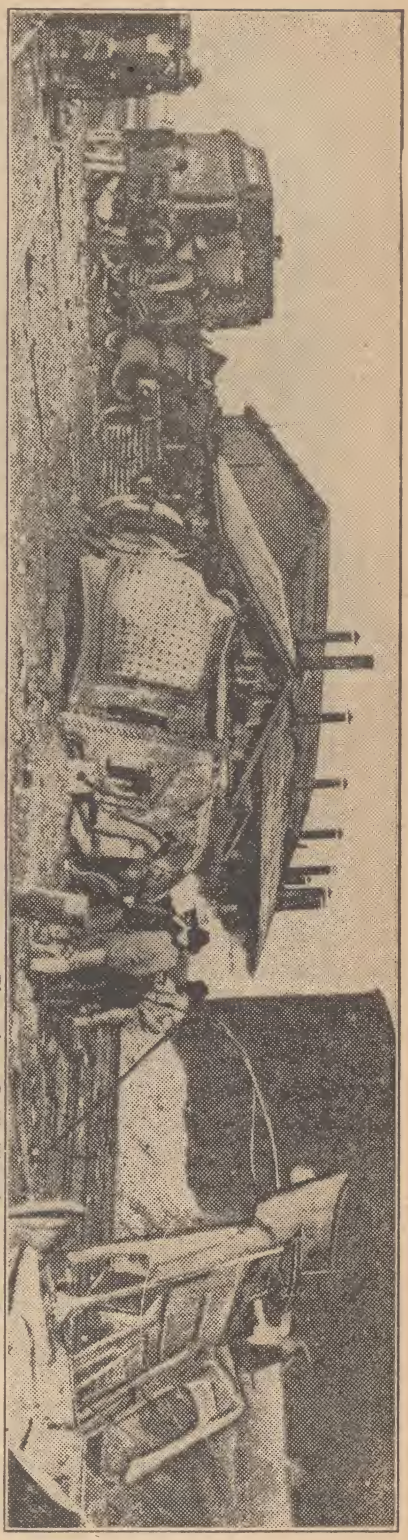
In a legitimate case of low water the crown sheet—the ceiling of the firebox—gets overheated uniformly. The more intense the heat and the lower the water, the bluer the color of the metal exposed to the fire. Along the point to which the water has fallen on the side sheets there is almost always a gray line, known as the low water line, plainly visible on the sheets afterward.

When boiler sludge or mud, caused by water impurities and too infrequent or careless boiler washing, stick to the sheets, they will also burn or rupture. In this case the crown sheet will show overheating only where the mud and scale has been, and almost invariably the overheating will be in areas about two feet in diameter.

In some instances of boiler explosions due to bad water, the side sheets generally are a deeper blue than the crown sheet itself. The overheating is spotty. There may be two or more places on the crown sheet that will indicate lack of water, and down on the side sheets there will be the same indications. Explosions caused by such extreme "foaming" of the water are fortunately not common.

All enginemen know that a water glass which is working well is none too trustworthy an indication of a locomotive's water level, and that the only way to be sure is to open the gage cocks and note their exhaust. But it's easier to look at the glass than it is to try the gage cocks, and sometimes they go untried too long. If so, and the water glass is defective, things may happen.

The glass itself, to be sure, is generally all right. But it may be too short or improperly fitted, so that its rubber gasket extends beyond the end of the glass. When the gasket swells due to age and continued heat, it will close the hole in the water glass. Or the passage from the boiler to the glass may be stopped up with scale, its cleaning having been neglected when



When Engineer Harry Penfield Brought the 2284 in Late from Her Regular Tucson-to-Lordsburg Passenger Run One Day About 33 Years Ago, He Left Her on the Siding for the Lordsburg Roundhouse Men. An Hour Later Hostler Joe Woods Got on Her, Noticed the Water Was Low, Tried One of the Gage Cocks. After the Smoke Blew Away She Looked Like This. But Believe It or Not, Joe Woods Was Only Slightly Hurt, and Was Back on the Job a Couple Days Later

Photo from C. W. Thornburg, R. 3, Box 219, Anaheim, Calif.

Photo from G. C. Slawson, 320 Riverside Drive, New York City

What Happened When the Crown Sheet on No. 131 of the New York, Ontario & Western Gave Way One Day in 1909

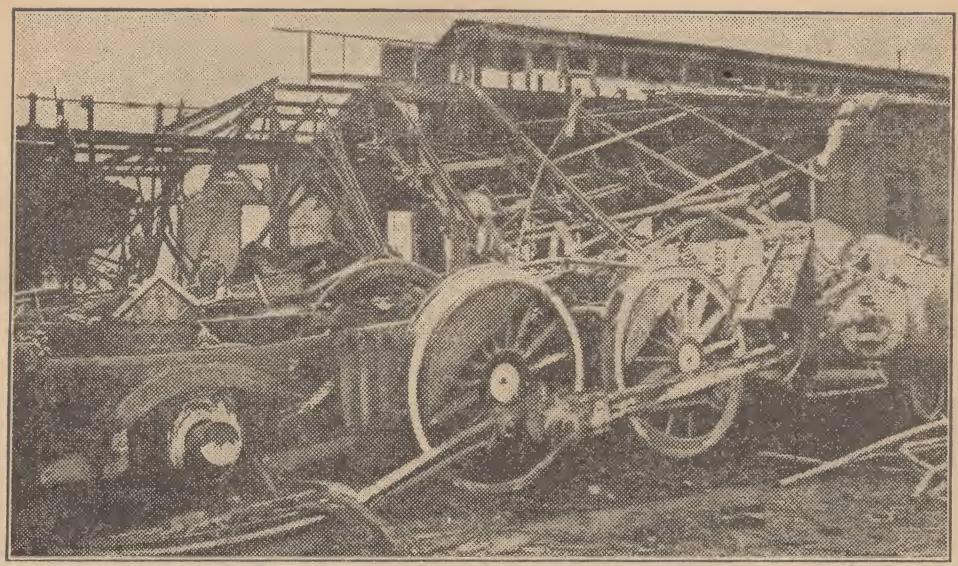
the boiler was washed. Federal law, incidentally, provides that every boiler must be washed at least once a month.

Boilers do not just "take a notion to let go," and a boiler explosion is not an act of God. Boiler explosions due to excess pressure are the most destructive. The Bureau has investigated a few such accidents, which luckily don't happen every day. They are caused by defects in the steam gage or safety valves. If the gage goes haywire, an incompetent employee may screw down the safety valves so that they will "pop" (let off steam) at an indicated pressure far from correct.

What has happened, probably, is that the gage siphon pipe connecting the gage with the boiler has been stopped up or the valve in the pipe closed. Contrary to popular belief, no steam enters the steam gage, for the heat of steam would upset its accuracy; instead, a siphon pipe is provided in which the steam condenses to water before it reaches the gage. The law provides that the steam gage be tested before setting pops, and that a second tested gage be applied to the dome in plain view of the man setting them.

An explosion due to overpressure is illustrated on page 11. The engine is (or was) No. 704, a heavy oil-fired passenger engine on the old Galveston, Harrisburg & San Antonio (now S.P.). Skyward was the direction taken by the machinist setting its pops, back in 1912; and the explosion killed 26 and injured 30. It was said to be the most disastrous accident of its kind on record.

An investigation by the Bureau brought out that one piece of this boiler weighing 1,600 pounds, including the wrapper sheet and dome, came down a quarter of a mile from the scene. The back head was also blown about a quarter of a mile. This piece weighed 1,250 pounds and was tossed through two sides of a frame residence. Another piece of this boiler weighing 900 pounds was hurled half a



The Galveston, Texas, Machinist Setting the Safety Valves on This Newly-Repaired Engine Thought He Had 50 Pounds of Pressure When He Actually Had Around 200. Just about the Time He Thought He Had Her Up to 200 She Couldn't Stand It Any Longer, and One of the Most Disastrous Locomotive Explosions in History Occurred. Story Below

mile. The back driving axle was broken and the main and front wheels forced part way off. Property damage was estimated at $47,000, including a wrecked roundhouse and other shop buildings.

This locomotive had been out of service for a month, during which time she received a set of flues and other repairs, including grinding in the safety valves. When the engine was fired up the safety valves opened at an indicated pressure of 50 pounds, and an employee screwed them down, forcing the fire for an hour to make them pop at what he thought was the correct pressure. Actually, it was more than 800 pounds to the square inch.

Probably the explosion was caused by a defective gage or gage siphon pipe. A careful mechanic would have detected the trouble before screwing down the pops. After this disaster the rules regarding safety valves and the use of an additional tested gage when setting these valves were tightened up drastically.

A LOCOMOTIVE boiler is internally fired, that is, the firebox (usual design) is supported by staybolts extending through the outer sheet, and is surrounded by water except at the bottom, which of course is made up of the grates. The wrapper sheet, through which the outer end of the bolts are screwed, is not exposed to the fire, while the firebox sheets are. Steam pressure does not break staybolts, but the "breathing" of the firebox—the bending and straining of the sheets due to unequal expansion and contraction —does break them.

These strains, and the vibration of the engine at work, cause stays to crack or snap. Invariably they do so near the outside sheet. For this reason a small telltale hole is drilled in the center of the staybolt. (Stays longer than eight inches and some flexible stays are not drilled.) When the bolt breaks steam and water will escape through it. These holes, alas, are often plugged to stop the leak temporarily, and sometimes they are forgotten too long.

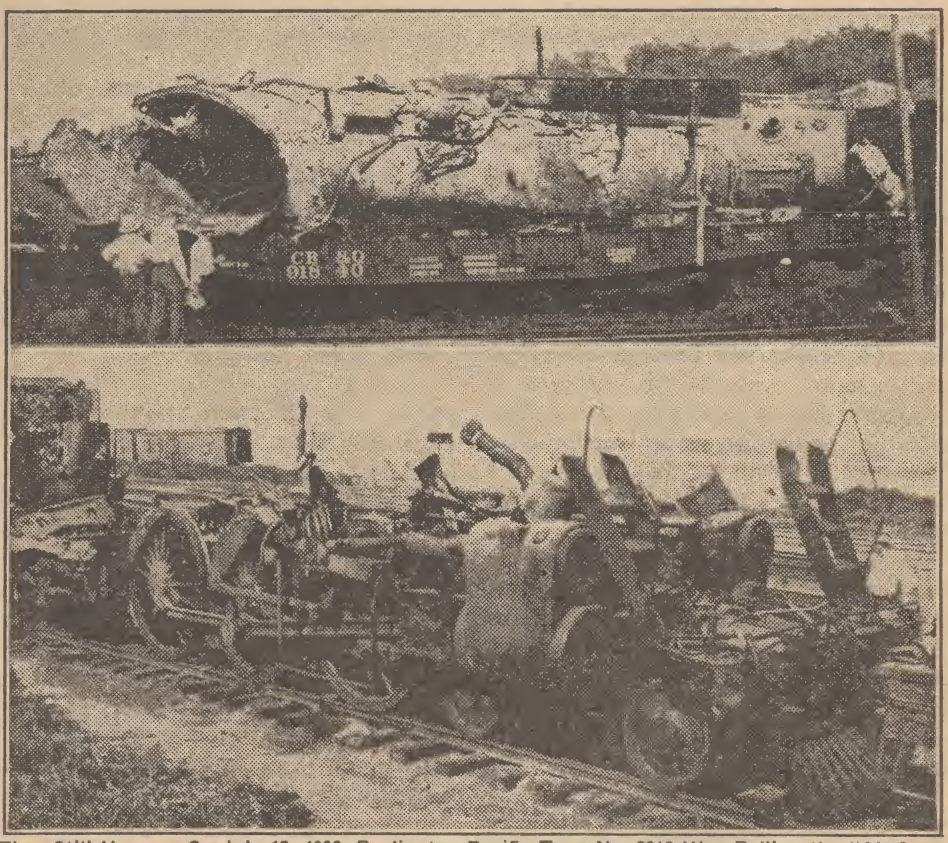
Locomotives are not allowed in service when there are two adjacent stay bolts broken, or three broken in a four foot circle, or five broken in the entire boiler. Investigations after explosions have shown that some locomotives have been operated with as many as 200 broken stays (there are about 1000 stays in a small boiler).

The photo on page 6 shows the results of an explosion due to broken stay bolts. In this case there were only nine good ones in the throat sheet. The broken ends of the bolts were covered with scale of two different colors, proving the defects had existed for months.

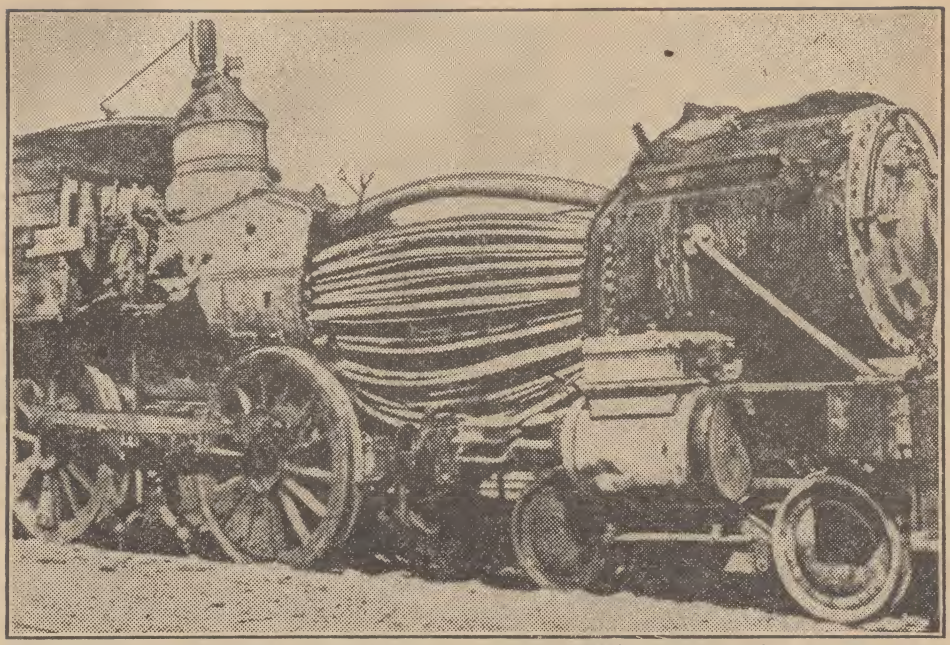
An inspector can detect a broken staybolt by tapping it lightly with a hammer. If the hammer bounces back as though a solid piece of metal were struck, the bolt is all right; but if hammer seems to stick to the bolt, it isn't. There is also a difference in the sound and vibration of the sheet. An investigation after the above accident showed that a few months before the explosion ten broken stays were reported in the side sheet. The master mechanic (who was killed when the boiler blew up) advised the general manager that these bolts had been renewed, but examination showed that they had not.

This locomotive was not owned and operated by a railroad, but by a private company. The numerous accidents we read about on sawmill lines and other private rail lines compared with the few disasters on Class I railroads speaks well for the efficiency of the railroads and their inspectors, who go over staybolts at regular intervals and make a hydrostatic test of the boiler annually at 25 per cent above working pressure.

Boiler shell explosions happily are not frequent, but the photo on page 13, taken in 1914, shows the results of such a disaster. Failure occurred along the edge of a large patch that had been riveted to the bottom of the boiler, and the missing portion was found 800 feet away. The ex-



They Still Happen. On July 18, 1933, Burlington Pacific Type No. 2818 Was Rolling the "Ak-Sar-Ben" into Omaha Station When She Blew Up—Right Through the Station Concourse. This Photo Was Taken at the Roundhouse the Next Morning by F. H. Sutton, 1517 Grant St., Omaha, Who Saw the Engine and Train Only a Minute or Two Before the Blast



An Old Patch, Plus Corrosion and Neglect, Was the Simple Recipe for This Boiler Shell Explosion

plosion was caused by corrosion, called grooving and pitting, along the edge of the patch on the inside of the shell. This sheet had been eaten away until in some places only one-sixteenth of an inch of good metal was left.

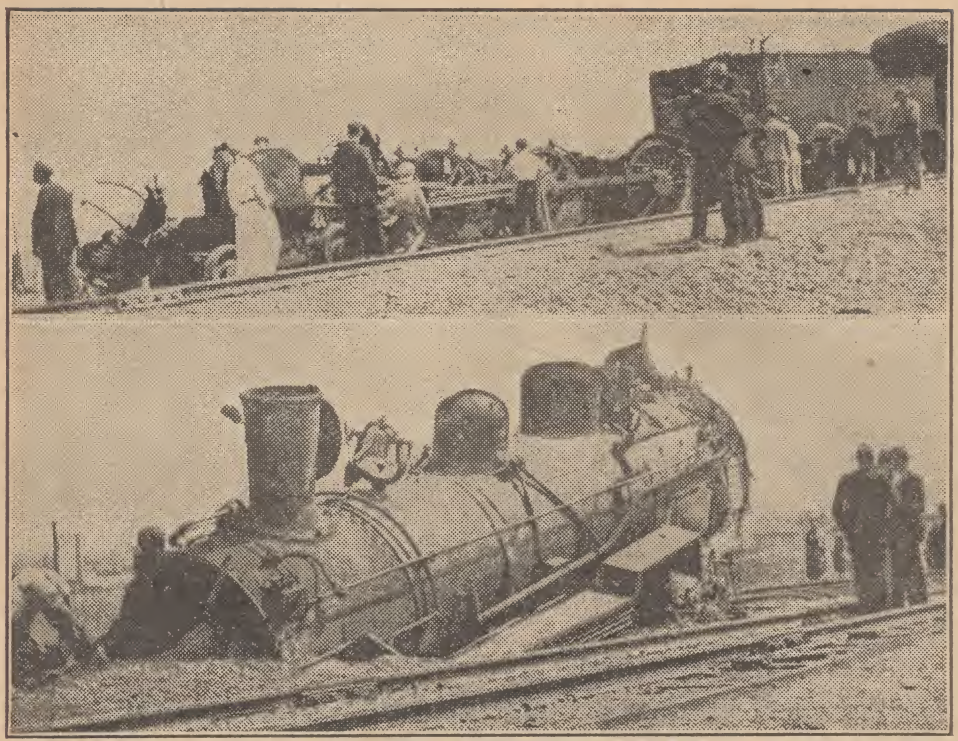
Such a failure on modern power is unlikely, for the shell is over an inch thick. The boiler shell of this old pelican was only three-eighths of an inch thick. Pitting and grooving are apt to occur along lines of stress in a boiler. When strained by repeated bending, steel rusts along the line of stress—in this case along the edge of the patch where a thin section joined a thicker one. Impure or untreated feedwater aggravates grooving and pitting.

Mechanical engineers have a simple formula for calculating the bursting pressure of the shell of a boiler: they multiply the tensile strength of the plate (in pounds per square inch) by its thickness (in inches) and divide by the radius of the boiler (in inches). This formula assumes the longitudinal seam is as strong as the solid plate, and it should be multiplied by the "efficiency" of the seam, or 70 to 90 per cent, to get the actual bursting pressure. The tensile strength of steel plate is taken as 55,000 pounds per square inch.

The inspection law provides that flues shall be removed and the inside of the boiler scaled and inspected every five years. Jacket and lagging must be removed and the shell inspected every five years.

Too many boiler explosions have a history something like this: after many years of faithful service the boiler develops serious leaks. They are reported various times and caulked each time by cheap help, and signs of distress at the seam or other danger signals are not noticed. Telltale holes of leaking stays are perhaps riveted over or plugged. Shortly afterward the boiler lets go and the cause of the explosion is assigned to some obscure defect, or to low water, if the man operating it is killed.

This applies especially to boilers not under the federal law. The Class I railroads and Bureau of Inspection are thoroughly familiar with the safe life of a boiler (less than 20 years) and the older boilers are carefully watched and scrapped and thoroughly repaired before they become dangerous.



Photos by W. W. Johnston, 532 S. Harrison Ave., Kirkwood, Mo.

The Engine Watchman Fell Asleep, They Say, and When He Finally Awakened and Gave the Boiler a Shot of Cold Water It Did More Harm Than Good. The Boiler Fell 75 Feet Ahead of the Wheels, and the Cab 50 Feet Ahead of the Boiler. It Happened at 4.30 on the Morning of April 30, 1933, to Frisco Engine No. 1104, at Valley Park, Mo.

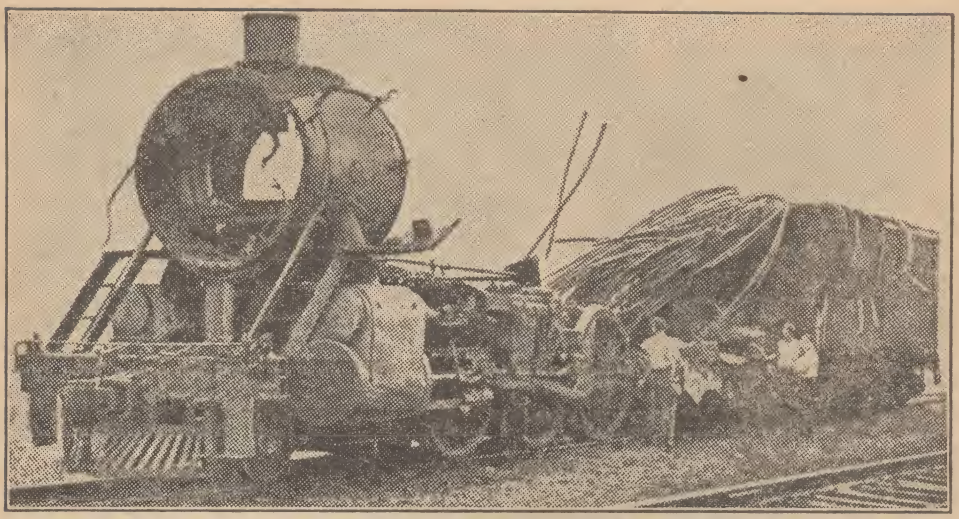
Most engines are equipped with arch tubes, which extend through the firebox, not only supporting the brick arch (which keeps the flames from direct contact with the tube ends), but also conducting boiler water, and so improving circulation. Failure of one of these tubes is no laughing matter. Listen to the tale of an engineer who was in the cab when a tube pulled out of the throat sheet:

"There was a report like gunshot, and the cab was filled with live steam and flames. I crawled out, hung from my window by my knees until my legs were scalded, when I fell to the ground. The head brakeman and fireman hustled out the gangway, and the brakeman set the brakes by opening the angle cock at the rear of the engine (which was running light)." The arch hadn't been beaded over at the end, and this defect allowed it to pull out of the steel sheet.

The inside condition of the arch tube or firebox sheet may be judged by its outside looks. If the fire side is perfectly clean, with no honeycomb deposit, it will be free of scale on the inside. Fortunately, therefore, a good inspector, if he does a halfway conscientious job, can be assured that there are no hidden dangers lurking in the boiler when he has O. K.'d the engine.

For all that, boiler explosions still occur, and the boilers which blow up sometimes are those of the newest engines in the country. Last January third, for example, one of the Wabash's latest 4-8-4 type locomotives, No. 2917, let go just as it was pulling out of Adrian, Mich., killing the fireman, engineman and brakeman. In this case, the engine was hauling a train of 55 cars bound for Chicago, had just taken water when the blast came.

The next morning the Bureau's inspec-

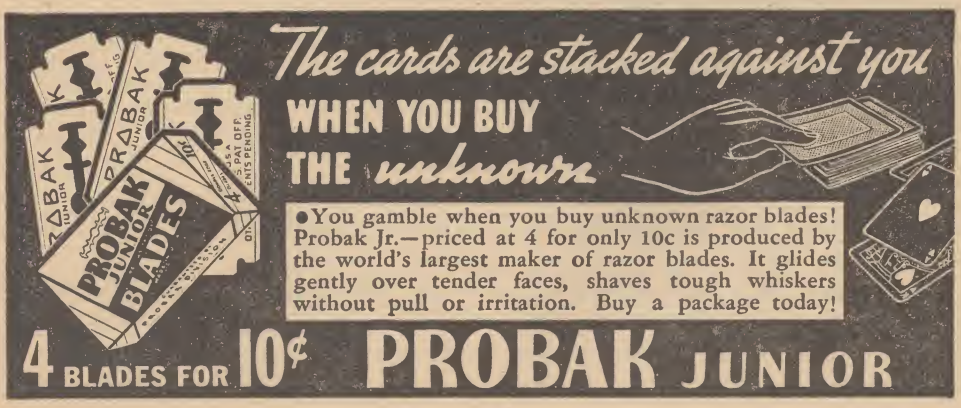


And This Baltimore & Ohio Pacific Type Was Pulling Train Through Allison Park, Pa., on June 21, 1932. When Her Boiler Went Up

tors were on the job, as were the railroad's own men. As usual, all of them refused to comment on the accident until all the facts were in hand—that is, not only until the twisted sheets of the firebox had been thoroughly examined by experts, and other facts in the case established, but until the findings had been weighed and their indications agreed upon.

Since the engine was new, and the train had just stopped for water, the finger of coincidence pointed to the probability that the boiler water had sunk to a dangerously low level because the tender was empty, and that cold water had been injected into the boiler on the overheated sheets above the firebox. As in every case of this kind, the men who could tell the most about it are dead. If it was definitely established that there was plenty of water in the tender before the water stop was made, the possibilities narrow down to the alternative that (1) all three men in the cab neglected to ascertain the water level properly, or that (2) there was a defect in the boiler or in the water-measuring devices.

At the time we went to press, the findings had not been published. Perhaps they will be so obscure that only a well-conditioned guess will be possible. Even so, it will tell its story and teach its lesson.



Hogger's Boy

By ED SAMPLES

Author of "Blacklisted," etc.

It All Started When the Grady Twins Decided to Get Even with Him. That Was Their Biggest Aim in Life—Getting Even with Somebody

TOMMY SPRADLING was not a natural-born railroader like the rest of the family. In fact, he and his mother had always kind of planned that he should go to college and study law.

But the summer after he finished high school, he got chasing around with the Grady twins, tore up the family car, and had to pay a couple of stiff fines. His father, T. P., who was a freight hogger on the Memphis Lines out of Fort Jones, then set his foot down, refused to finance him, told the boy if he wanted to go to college he could dig in and earn the money himself.

Tommy had plenty of spunk. Without asking the aid of his father or his tallowpot brother, Frank, both of whom were always ribbing him about his worthlessness, he hit Jack Spofford for a job braking.

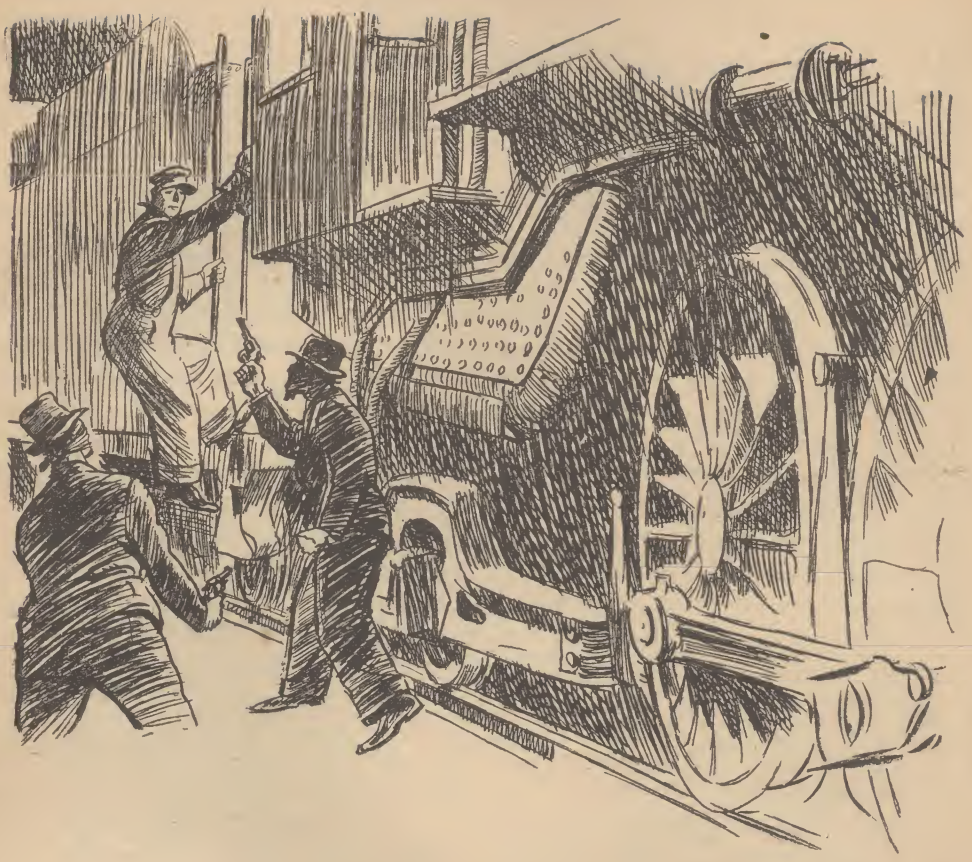
"You couldn't do a job braking," the trainmaster said with a laugh. "That's work for men with strong backs and the weak minds."

"I can do anything that anybody else can, sir," Tommy answered shortly.

"Kid, you'd be in trouble up to your neck from the day you went to work," Spofford argued. "Brakemen have to hop over trains like monkeys, and stay awake nights and rawhide around in the rain."

"I don't give a hang what they have to do," the youth persisted. "I can do it, and I want the job."

Spofford hired him. Secretly Frank and T.P. were glad of it. They told each other that maybe it would make a man out of the kid, but they never let



on to him. They razzed him about student boners and gave him all kinds of advice. That's what they were doing one night when the caller ordered Tommy to work the hind end for Old Bill Hanscom.

"You don't want to do short flagging against these passenger trains," T.P. warned. "And don't go to sleep leaving a switch open."

"Yeah," Frank put in, "and you want to watch old Hanscom. He eats student brakemen alive."

"He'll have more than a mouthful if he starts in on me, big boy," Tommy shot back.

They were eating supper then. As soon as Tommy finished he grabbed his grip and lanterns and headed for the yard office.

This lantern of his was an old skeleton frame which his father had brought over from the Texas & Pacific when he quit braking there years ago and began firing on the Memphis Line. It had the T.&P emblem stamped in the metal top, and a nick in one of the guards which had been made by the knife of a border bum. There wasn't another lantern like it in the whole country.

Since Tommy had gone to work for the railroad he had kept pretty much away from the old crowd, particularly the Grady twins.

The twins were not in good standing among railroad people. Even when they were little shavers they had put a stick of dynamite with a cap in it on the railroad track to see what would happen

when the train came along. Later, they had come home from reform school in a sullen mood, vowing vengeance against the railroad for two years behind the bars. Now, although the twins were dressing up and playing the gentleman, the men who ran trains always feared they might carry out that old threat.

Bolger Grady, the bigger of the two, was sitting on a baggage truck between a couple of tough girls that night when Tommy came down by the passenger station. Angered because, as he put it, Tommy had been trying the *high-hat,* Bolger had not spoken to him for six months; but that night, being in select company, he smirked and greeted:

"Hi, Angel Face!" That had been Tommy's nickname when he was in with the fast set.

Tommy took it good-naturedly. "Well, if it ain't old Clark Gable himself!" he flung back.

The girls tittered, and Tommy passed on. Bolger, just drunk enough to be nasty and smart, slipped off the truck, fell into step beside him, and laid a rough hand on his arm.

"Kinda gone back on your old pals since you been workin' on the railroad, ain't yuh, brakie?"

Tommy set his grip on the platform, and tightened a hard fist on the old skeleton frame.

"Listen, Bolger," he said. "I'm busy right now. You'd better go back to Annabelle and Pearl. They're waiting for you. Take your hand off my arm!"

"Oh, wantin' to git hard, are you? Now you listen, smart guy. You go actin' up around me, an' I'll—"

"You'll *what?"* The brakeman faced him angrily, chin to chin. "Grady, if you open your trap again I'll wrap this lantern around your neck."

For a tense moment the two stood glowering at each other. The girls were not giggling now. Bolger's hand started toward the hip. The old skeleton frame was back on the end of an arm tight as whipcord.

Bolger backed away, muttering. "I'll get you for this, Spradling! I'll get even with you!"

Tommy knew it. That had always seemed to be the Grady twins' biggest aim in life—getting even with somebody.

HANSCOM'S crew had had a grilling week. Short daylight rests, with sun scorching the shingle and heating those upstairs rooms until men could not sleep. And all-night drags into and out of sidetracks, fighting to keep awake and watch the train.

When he went into the office, Hanscom, almost crazy with the heat, was cussing everything in sight. He bellowed to Tommy:

"You workin' the hind end for me?"

"Reckon I am, Mr. Hanscom."

"Well, if you ain't worth more on the caboose than you are around the head end, you'd better go home and go to bed."

Tommy resented that. He had done pretty good work on Hanscom's crew, heading into and out of sidings, running hot boxes and things like that. Hanscom changed to other grievances.

"Marked up for another all-night drag! Nine times in succession! Scrap heap that wouldn't pull a dead chicken out of a slop pail! Student engineer! Student fireman! Two student brakemen!..."

Tommy knew he was in for a night of it. It was bad enough to *work* the hind end for Hanscom, but to ride the caboose and *listen* to the old conductor's ravings was still worse.

Their trip over was a scorcher. The

student engineer was a young chap named Jones, just promoted from passenger firing. Somebody had made the mistake of calling him "Casey," and he was trying to live up to the name. To date, he held the record for doubling hills, pulling out drawbars, and flirting with the devil on the steep winding grades into those narrow valleys.

They got away from Fort Smith that evening with sixty-seven empties ahead and ten cars of gasoline next to the crummy. Tommy had been railroading long enough to know that such a train is hard for any engineer to handle. Every time they started into or out of a sidetrack he expected Jones to pull a "lung" and give the train crew a nice rawhiding.

Nothing happened, however, until they went into the hole at Dismal Hollow to meet a couple of extras and let a passenger train by them.

Jones did not stop pulling out, only slowed for Tommy to close the switch and catch the caboose. A moment after he had swung up the platform, he heard the air going into emergency. The train jammed to a stop. Jones whistled out a flag.

Tommy said: "Well, he's done it!"

Old Bill Hanscom came from the caboose. When he quit cursing the student engineer, he turned to Tommy.

"Set the brakes on ten cars on this hind end!" he ordered. "Then go back flaggin' and stay till you're called in. We may be here all night, the way that air went out. Now hurry!"

Tommy obeyed instructions. He bled off the air and set the hand brakes with a club. Then he took his white light, a red light, two fusees, and a pocketful of torpedoes and went back. He did not count telegraph poles, but he went around the curve at the lower end of the passing track, laid two guns on the rail, and came back to a point just above the switch and sat down to wait.

DISMAL HOLLOW is down in a hole. The siding, approached from either end on sharp curves and heavy grades, is on a long tangent with gray limestone cliffs feathered in dark green cedars above it.

Some of these cliffs rise straight up like castle walls. All of the others have since been blasted down and hauled away; but at that time five of them, undercut by running water, leaned far out over the tracks. Of course, there was no danger. They had been examined, and pronounced safe; but Tommy speculated on the possibility.

He could clearly see them in the light of the setting moon. They seemed to hang as a threat, a threat of suspended vengeance. The thought of vengeance reminded him of Bolger Grady and his threat that afternoon. He wondered if and when and how Bolger would strike —probably like a shadow from the darkness.

An hour passed. The moon went down. Tommy heard the engine go up the hill and come back. Not knowing that Jones, in taking slack, had snapped the train into five pieces, he expected to be called in; but there was no call. After a while the engine went up the hill again.

He sat on a rail beside the white light, with the red one between his feet and the two fusees sticking into the cross-tie. The air was soft and warm. Peace and quiet brooded over the valley. Tommy nodded, his eyes heavy.

Suddenly a hoot owl in the cliff gave off its weird cry. Tommy got up and walked the track, returning at length to stand by his fusees.

Under the bluff, soft moss invited. Summer breathed down the valley. The

bullfrog chorus in the river was a soothing lullaby. Deliberately the youth turned his back on the moss and stared into the darkness toward the river. The *Oilfield Merchandise* would be coming soon. His father and Frank were on it. They wouldn't find *him* asleep under the cliff. No, siree!

Determined to keep awake, Tommy took another turn up the track and returned to sit again on the rail. He did not think he would sleep sitting there; but before he knew it, the stars had faded, the bullfrog chorus had died, and he slipped down onto the track, dead to the world.

Dimly he heard T.P. whistle for the crossing, but he didn't get up. He was dreaming then, dreaming a crazy dream about this cliff, his dad, and Bolger Grady. He heard the wheels hit the two guns on the rail—but the sound was not of exploding torpedoes. It was the sound of Bolger blasting lime stone.

Seconds passed. A blinding light was in Tommy's eyes. Other whistle blasts were ringing—sharp, frantic whistle blasts—warning of something on the track. The boy opened his eyes. He jerked up his head. Two hundred feet away, a headlight was sweeping toward him. Wide awake now, he leaped to his feet, snatched his lanterns and started swinging a stop sign.

Frank and his father were both loaded for him when he climbed into the cab. They took it turn about. Frank started with:

"You're a hell of a railroad man!"

And his father rasped: "Ain't you got better sense than to lay down on a railroad track and go to sleep!"

"First thing you know," Frank jested, "one of these freight hogs'll give you a haircut below the ears and trim off your toenails at your hip pockets."

They ragged him all the way to the caboose. Tommy usually had a snappy comeback, but this time he hadn't a word to say. He went into the caboose, took a drink of ice water, and hurried away to help Hanscom chain up the last car to drag into Wheatland.

Tommy knew he'd never hear the last of that nap; his father and Frank would never forget it. They would tell the boys, and when the story got going everybody on the job would be ribbing him. But he did not expect anything serious to grow out of this incident. Probably it wouldn't have if it had not been for Hanscom and Jones scrapping on their trip.

HANSCOM'S crew got a break next night. They caught the *Oilfield Merchandise* west bound. Tommy noticed when he went by the yard office that Frank and his father, marked up for the *Oilfield Express,* would follow him within an hour. He got out his markers, let off his brakes and came over to the head end.

Hanscom brought the flimsies, gave one set to him and the other to the engineer. When Hanscom was running a train he *ran* it; he'd run both ends of a train if the engineer would let him. Forgetting that the hoghead had a watch and a timecard in the cab and he had a lantern and a brake valve on the caboose, the old conductor started in telling Jones where to go.

He said: "If you can get this train out of the yard without doublin' or pullin' all the drawbars out, we'll go over around Sperry to meet Number Four."

Jones didn't say a word. Hanscom had chewed on him all the night before, and he was on the raw. He climbed into his cab and told the fireman, Red Rock, he was going out. They had a

Hanscom Cursed and Raved and Got on Top, but It Did No Good

high-stepping Lima hog. Old Bill had let the pencil slip and stolen a hundred tons in figuring the train. He walked her out of the yard like a passenger.

When half of the train had gone by, Tommy and the conductor knew they couldn't wait for the caboose. They went high and walked the tops to keep from getting left. Hanscom started in anew, berating student engineers.

"Nut-headed fool!" he stormed. "If I don't tell him when we get to Sperry! By Lammins, I'll bet he don't ever try to leave me in the yards again!"

Hanscom was mad, but he was madder still when they got into Sperry. Jones made a good run going over. When he whistled for the milepost he had plenty of time to make Oakdale for No. 4. If he had had as much brains as nerve and temper, he would have seen it, changed his plan, and gone through.

But Hanscom had said *Sperry*. Jones didn't do his own figuring. He whistled for a meet. Tommy had figured five miles back they should go to Oakdale. Without asking Old Bill, he started swinging highballs out of the cupola window; but Jones slowed for the switch.

Hanscom was below making reports. He did not take time to look at his watch. He came storming into the cupola.

"What in hell's he headin' in at this place for?" the old man roared. "Why don't he get out of here and go?"

Hanscom went through high and swung "go" signs. He cursed and raved and got on top of the cupola, but it did no good. Jones headed in at Sperry; and Hanscom went over to give a student hoghead another lesson in railroading.

Tommy did not hear the lesson, didn't hear Hanscom thunderously inquiring why engineers didn't look back for signals, why they didn't use a watch and a timecard instead of expecting somebody else to use it for them. He

did not hear Casey Jones advising Hanscom that the proper place for a conductor is back in the crummy minding his own condemned business. Tommy arrived at the head end in time to hear Jones bellow:

"All right, numbskull! You want to go places. Now get back to your caboose and strap yourself in, for when we leave this village we're goin' to the city."

JONES wasn't kidding when he said that. Leaving Sperry, he tried to blow the grates out through the smokestack. He went out of there sixteen minutes ahead of No. 5, the *Oilfield Express* with T. P. Spradling at the throttle. In half an hour he gained nine minutes on their time.

Tommy had been drowsy when they headed in at Sperry. He was wide awake when they left, and didn't bat a lash that night. Jones took those merchandise cars down through the hills with the throttle out and the brake valve on full release. He whipped the caboose around curves until Tommy almost imagined he could reach out of the cupola window with his bare hands and scoop up daisies from the right-of-way; and he and Old Bill both sat braced in the cupola expecting the caboose to jump the track and go rolling down some mountain.

T. P. Spradling had always been the wild man of the Boston Mountain district, but he had never made any such time with a freight train as Jones made that night. He would whistle for a station and, without waiting for a highball, would send his two piercing blasts ringing like a challenge on the night air.

That's what he did at Wheatland and nobody said anything. Thirty-six minutes was plenty of time to go nine miles to Black River and clear No. 6, the *Oilfield Express* westbound. Tommy did not dream of his trying to go to Dismal Hollow then.

With the *Express* due in Dismal Hollow, nineteen miles away, in twenty-three minutes, no crew on the road would think of such a thing. True, much of that nineteen miles was a regular freight-train racetrack. Fast men often made it in twenty minutes on the fly; but the fastest of them would not think of going over there on twenty-three minutes, because they had to figure running time, a few minutes to head in, and ten minutes' clearance against these limited trains.

But even before he whistled for the station, Tommy had a hunch that Casey Jones was going to Dismal Hollow. He had made nine of the nineteen miles in less than eight minutes, and he came down on the milepost running seventy miles an hour. Again he blew the one long blast and, without waiting for a signal, sent out the two short ones ringing like a challenge.

All night Hanscom had sat glowering over the tops of the rocking arcs, his lips clamped down on the stem of the dead pipe. Now he jerked the pipe out of his mouth and grabbed his lantern off the hook. He didn't go on top of the caboose this time. It was swinging and rolling so that a monkey couldn't have stayed right side up on it.

Leaning out the window, he held to a grab iron and swung washout stop signs. Tommy swung them from the other side; but if Jones, the student fireman or the head brakeman ever looked back, the hind end never saw it. They roared down to Dismal Hollow in the face of No. 6, made a grandstand stop at the switch, and cleared them by a scant two minutes!

Choking with rage, Hanscom struck

for the head end the minute the train slowed enough for him to walk the top. Before going out he told Tommy:

"You shut this switch and look out for the rear. I'm goin' over and ride the engine with that imbecile hogger to keep him from killin' us all before we get in. Now don't you go to sleep and leave a switch open or miss an order board."

TOMMY had no chance to sleep that night in Dismal Hollow. Their wild ride had scared up a flock of hot boxes. He carried water and cooled seven of them. All the time he kept remembering last night, and his dream about Bolger Grady, and T. P. and a train coming down into Dismal Hollow.

Whenever he worked under one of those overhanging cliffs he felt a peculiar sensation on his spine. He remembered that T. P. and Frank, coming down that night on No. 5, would be along within the hour.

Hanscom must have talked pretty straight to the engineer, for Casey went out of Dismal Hollow railroading by the book. He held down to forty miles an hour. Tommy tried to sit in the cupola and watch the train, but the midnight air blowing cool on his forehead set him nodding. Determined never again to sleep on duty, he went to the rear platform to keep awake.

No. 5 was now closing in on them. When the hogger whistled for Fort Smith he whistled for a meet and slowed to head in.

If the engineer had not been acting wild, the conductor would have been on the rear to see that Tommy was awake to close the switch; but Hanscom did not come back. He rode the engine around to the telegraph office, leaving Tommy alone on the caboose.

The east switch at Eldon is on a long curve where the track swings around a bend in the bluff and straightens to a tangent. When the light was burning, the target was visible for about ten car-lengths up the main. The light was not burning that night. It was out.

Tommy did not consider that fact of importance just then, because switch lights sometimes go out during the night. He dropped off, closed it, and caught the rear platform. After turning his markers he filled a pail of water, took a bucket of "dope" and started forward to look after his hot boxes.

When he was three car-lengths from the caboose, T. P. with No. 5 whistled for the milepost. T. P. put the English on it, as he always did, thundering down the valley. Tommy stopped, turned, and looked back. He did not know why, but he was thinking of Bolger Grady and that switch with the light not burning.

Leaving his buckets, he started walking toward it, slowly at first, then faster and faster. He passed the caboose. No. 5's headlight was now swinging the bend in the bluff, a quarter mile away. He could not yet see the color of the lenses of the darkened switch, but he had a hunch that when he did it wasn't going to be green.

Tommy broke into a run. He didn't take his eyes off the switch. A second before the headlight came to blind him, he caught a crimson gleam against its approaching glow, and knew the switch was open. He leaped to the middle of the track, dashing madly toward it, swinging a stop sign.

T. P. Spradling was one hoghead who *never* slept on the job. Maybe that's why he had ridden Tommy so hard the night before. He had already missed the green gleam of the closed switch, so he eased the throttle.

When he saw Tommy's light swinging he sloughed his air to emergency and sent an answering blast. At fifty miles an hour he was racing down on the open switch. Brakes cut his speed to forty, and then thirty.

Tommy was running as he had never run before. When the express was five cars away, he was at the switchstand fumbling with the lock. A split second he hesitated before jerking the lever. He knew that if he failed to get it open, the train would fall all over the world. He knew also that at the rate the express was coming she would never make the turn into the siding.

Taking a chance, jerked the lever; and as the hot breath of the engine had swept by him, he set it to send the engine down the main line to safety instead of into the siding to destruction.

T. P. Spradling whistled out a flag, started pumping off his brakes, and came out of his cab with a lighted torch.

"Out Skylarking Around"

TOMMY, believing that he had done a piece of railroading worthy a Spradling, took his time about locking the switch, and then went walking toward the engine. He was swaggering just a little, but the swagger left him when he came to where the two veteran rails were waiting.

T. P. was glowering balefully. Hanscom was red and blue and purple.

"What in tarnation is the matter with you, kid?" he yelled.

"Not a thing," Tommy said proudly.

"Well, by the eternal Jehosphat, there's goin' to be somethin' the matter with you!" T. P. bellowed. "Went to sleep last night on the railroad track and almost got your hams cut off. Went to sleep tonight on the caboose and almost wrecked a passenger train."

"But I didn't go to sleep tonight, Dad," Tommy protested.

"The hell you didn't! If you wasn't asleep when you come through that switch, then why didn't you shut it?"

"But I *did* shut it."

His brother Frank laughed sarcastically. The passenger conductor came over and the four of them took turns telling him how worthless and ornery and inefficient he was.

In vain Tommy insisted he had closed the switch. He pointed to his markers turned green, to the pail of water which he had set down alongside the train. But not even his own father believed him.

After they had cooled down a little, they talked about whether to report the matter or forget it and cover the delay with a hot pin. T. P. was pretty hard.

He said: "I'll not risk my job to try to cover it. A boy that can't stay awake—"

"I'll say you won't!" Tommy interrupted hotly. "If that's the way you feel about it, Dad, you won't have to report it. I'll do the reporting myself. I'll tell Mr. Spofford exactly what happened, and if he wants to fire me he can fire and be hanged."

They wired in their reports from Eldon. T. P. took the express on to Fort Smith. The merchandise train followed him out. As they were running through the switch, Tommy saw against the glow of the firebox a lone hobo come up a ladder and park himself on the running board. He went over the top of the train to see if he knew the fellow, but he didn't. It was

only a ragged kid, no older than himself, going into Fort Smith.

The trainmaster fired Tommy Spradling. He called the investigation that morning for 10:30 and had both crews in. When Tommy told him what had happened, he burst out laughing and said:

"Listen, kid! Your mother might believe a yarn like that but a railroad official wouldn't."

"But doesn't it mean anything to you that the light wasn't burning?"

"I've seen lots of them not burning—"

"Or that my markers were turned, and I had started to look over my train?"

"Quit stalling, kid!" Spofford blustered. "I'll explain it all to you. You was dead to the world when you come through that switch. You dreamed you shut it. When you got into the clear, you waked up, went but half asleep and turned your markers. Then you got your water and started to look 'em over. When you heard a train whistle, you suddenly come alive to the fact that you *hadn't shut it*. Nope, your tale's too thick, kid! You left that switch open. You might have wrecked a train and killed somebody. Next job you get stay awake."

BELIEVING that somehow the Grady boys had checked on his train, had known when he was coming through, and purposely pulled the trick on him, Tommy went up to Eldon that afternoon looking for clues. He did not find so much as a track in the dust.

After he got back home turned in his switch key, badge, and book of rules. He took T.P.'s old skeleton frame lantern home, hung it in the garage under an old petticoat, and told his dad:

"There it is. You can have it."

Tommy was pretty sore. Being made out a liar and fired for something that he hasn't done makes most nineteen-year-old boys sore. He knew he had gotten a raw deal, and figured his father and his brother had helped give it to him.

They were pretty sore, too. They didn't make home a happy place for him to stay. From the way they talked one would think he had deliberately tried to murder both of them instead of risking his own neck to keep them from piling up in a railroad wreck.

That afternoon Tommy packed his grip to leave home. He would have certainly done so if it had not been for his mother. She urged him to wait a while, said that something might turn up to clear his name, and assured him the Lord looked after things like that.

Tommy couldn't quite believe the Lord had time to be running around looking after every little piece of human injustice, but he didn't tell his mother that. He remained home, resting up from a summer's hard work and saving some fun out of it.

There was a girl, of course. Her name was Lucille Martin. They didn't marry and live happily ever after; but Lucille believed him then, just as his mother did. She lived in a little town up the line toward Eldon. Her father was the village preacher. He didn't like for his daughter to be running around with hell-bound railroaders, and one day he gave her a whipping for going with Tommy to a dance in Fort Smith.

Lucille told the boy, of course; but she told him also that nothing could ever keep her from him, *nothing!*

On the 12th of September she got away from home under pretense of spending the night with a friend, and

she and Tommy went to another dance. This time, they didn't go to Fort Smith, though. They went up to Cold Springs, which happened to clock the same distance on a car speedometer as Dismal Hollow, and didn't get home until the baby hours.

That same night Frank and T. P. caught the *Oilfield Express* again, eastbound out of Red Rock. This was the train which hauled most of the currency and coin between the Oklahoma oil fields and the Federal Reserve banks in the East.

The men who ran her never gave the matter much thought, because Jesse James had been dead more than fifty years and the holding up of express trains had ceased to be a safe or profitable proposition.

They didn't think *anything* about it that night.

Talking about the kid brother and wondering to each other when he was going to get out and go to work, they were running down Black River hill four miles above Dismal Hollow. Frank went into the deck to shake his grates and cover the thin spot. T. P. had slowed to thirty miles an hour, keeping a sharp lookout on the curves.

As Frank banged the door shut and stuck his scoop in the coal pile, the pilot wheels hit a torpedo, and a second later hit another. T. P. whistled. The curve was on the fireman's side. Frank looked out the cab window.

"See anything down there?" T. P. asked.

"Yeah," his son shouted back. "Somebody down here on the curve with a red one."

"Ain't asleep on the track, is he?"

"Naw! He's sayin' stop."

T. P. answered with two short blasts of the whistle, and went letting out the air.

BECAUSE they had hit the two torpedoes, Frank decided it was a trainman down there flagging them, but as they ran on down, he became suspicious.

Trainmen usually carry a white light with their red one, and generally uncap a fusee as the engine comes in sight. This fellow had no white light and no red fusee. He had only a red lantern.

Frank yelled across the deck: "Keep your eyes peeled, Dad. There's something fishy about this."

"What do you mean *something fishy?*"

"Looks to me like we're running into a trap," was the answer.

The farther they went, the more certain Frank became of it; and when, running six or eight miles an hour, they passed the fellow with his head down making no attempt to catch the engine to explain, Frank leaped into the deck shouting:

"Dad, we're into a hold-up!"

T. P. started releasing his air to make a get-away; but fearing that he might run into an obstruction and wreck his train, he decided not to take the chance. Stopping at a point where the high cliffs overhung the track, he whistled out a flagman.

A moment later a fusillade of shots came from the river side of the train. A couple of bulls appeared from nowhere and started firing at the flashes.

They waited tensely for someone to show up around the engine but no one came. Evidently the bandits had not expected to encounter any resistance.

Frank always carried a hogleg in his grip. He got it out now and twirled the chambers to see that they were loaded.

T. P. said: "You'd better put that thing up, son. You're fixin' to get yourself shot."

"Might as well be shot shootin'," said Frank, "as to be shot standin' around there waitin' for 'em."

T. P. wasn't yellow, but decided that his skin was worth more to him than somebody else's money. So he said: "Put that thing up, I tell you! We get paid for running the hog. They hire bulls to fight train robbers."

Frank didn't say anything. He crouched behind the seatbox, taking an occasional peep toward the rear. Most of the train was hidden by the bluff, but the firing was pretty heavy. Occasionally a bullet came zipping by the cab window, just as a reminder that the safest place for the hoghead and the tallowpot was inside their engine cab.

T. P. was nervous. Sitting in a cab waiting for someone to come along and poke a gun into your ribs or against the back of your head and pull the trigger is enough to make a family man nervous. When Frank kept fooling with that gun, threatening to stick it out the window and take a shot at the flashes, his father barked:

"Either put that gun up or get out of here with it. I'm not fool enough to get myself shot, even if you are."

Frank had been watching the firing pretty closely. He had timed the shots which came by the window, had noticed they were coming at regular intervals. Whispering to his father to turn off the headlight and the dome light, he darted down the steps and climbed to a cleft in the rock wall. From this perch he could peer back along the train.

AT LENGTH the firing ceased. Evidently the bandits shooting from the darkness had driven the men to cover. There was a moment of tense silence.

Frank's heart was hammering at his ear drums. Suddenly a figure seemed to rise from the very foot of the rock on which he was perching, and ordered:

"You birds come out of there! And come out pickin' the stars!"

Frank's jaw tightened. That voice sounded familiar. He watched T. P. come from the gangway with his hands above his head and back down the engine steps.

A second bandit had now appeared to stand beside the first one. Frank could hear them searching his father and talking. Both of them were nervous and excited. One of them asked.

"Where's the fireman?"

"He run off," T. P. lied glibly. "You fellows scared hell out of him."

"Where did he go?"

"Quien sabe?" T. P. shrugged.

"Where did he go?"

Frank read menace in the tone. He was genuinely scared now. He had not reckoned on what they might do to his father when they missed him from the cab.

"I don't know, I told you," T. P. roared back.

"Likely story!" sneered his captor, who was Bolger Grady. "Spike, you look through that hog and rout him out!"

Frank's face set like flint. Spike was the little Grady twin. He peered over the rock. Yes, there was no mistaking either of those two bandits.

Spike went up the engine steps. He searched the cab, looked into the tank, and went around the pilot.

"Not here," he reported.

A third man had come now to stand beside the others. Frank could not see him in the dull light of the red lantern. The leader called to him:

"Stay there and cut off that express car! Now don't make a false move. Cut behind the second one and then

ride it down the hill. And you, old man" —he turned now to T. P.—"if you've lied to us about that fireman, it's curtains for you. Get into that cab and do as you're told!"

Scarcely daring to breathe, Frank watched his father climb into the cab and start working levers. The bandit leader was behind him, but the gun was not now in his back. T. P. was leaning out the window. Spike went high and stood on the tank, peering back. The man with the lantern lifted it and signalled ahead. The signal was not an awkward one.

"Go on," the robber ordered, "an' keep goin' till I tell you to stop!"

Frank was the kind of man who didn't like to start a job and not finish it. He knew he had a chance to bump those three and turn his father loose with the engine. He debated whether to use the chance. It would take fast work to do it and keep T. P's hide whole, but as he sized the situation he decided he could do it with unerring certainty.

Not ten feet away from him, and in plain sight under the dome light, T. P. released the air and hooked the Johnson bar in forward motion. Frank heard the hiss of steam easing into cylinders. The two express cars started moving. The man with the lantern shouted, "All right!" and gave a highball.

ONE of the bandits was leaning out of the cab window watching. Frank knew Bolger and Spike were both dead shots, but was willing to risk it. He whipped up the hogleg and pulled the trigger. Without waiting to see the effect of his shot, he whipped it around and fired at Spike on top of the tank.

Spike stumbled and pitched to the ground. Frank turned then to the man with the light and fired three times in quick succession. The fellow dropped his lantern, fell off the car, leaped to his feet and headed for the woods.

By that time T. P. was working on the old passenger hog, yanking those two express cars down the hill. A hundred yards away be whistled a long highball, signal to the men behind that he was going for the law.

While the echoes of the whistle were still ringing, Frank heard Spike Grady shout:

"Come on, you guys! They've shot Cap and got away with the engine."

From the darkness two revolvers barked. Their echoes whispered into the hills. The bullfrogs chorused in the river below. Over the highway an automobile engine sputtered and went roaring away.

The train crew now came out into the open. They were boldly carrying their lights and each was asking the other who had chased off the bandits.

Frank, feeling pretty proud of himself, climbed down from his perch and started walking back. When he passed the point where the fellow with the light had fallen, his foot touched metal. He stumbled, caught himself, and picked up the lantern which the man in his haste had left behind.

Even before he struck the match to look at the T. & P. emblem stamped in its top, he recognized it as his father's old lantern—the one which Tommy had used when he was braking, the lantern which yesterday had been hanging under on old petticoat in the family garage.

Most families have their internal bickerings and petty jealousies; but let one member stub his toe and head the family name toward the pit of disgrace, and the others rush instantly to his defense.

Frank knew that Tommy was rather sore at the railroad. Not having analyzed the difference between folly and downright criminality in youthful character, he jumped to the conclusion that the presence of this lantern here was proof that Tommy had been with it. But instead of hurrying out to give the evidence to the bulls, who were now coming forward, he slipped back on his ledge and concealed it under a pile of rocks until T. P. returned with the engine.

Then, being careful not to let others see him, he removed the old lantern from hiding, slipped it into the cab, and showed it to his father.

T. P. of course, was horrified. Like Frank, he could read only one meaning into the presence of that lantern—*Tommy must have helped to hold up the train.*

FATHER and son registered in at the roundhouse and went home, taking the lantern with them. They did not exchange a word in the whole four blocks. T. P. let them in with the latch key and they went straight to Tommy's room. It was empty and the bed had not been slept in.

"I knowed it!" T. P. groaned, "I knowed it! Damn that boy's hide! If they catch up with that bunch—and they will—he'll go to the pen sure as fate, maybe go to the chair if one of the bulls happens to die. And the whole family will be disgraced!"

Without arousing Mrs. Spradling, they went down to the living room to wait until Tommy came home.

Tommy had been saying good night to his Lucille when the express came down. This ceremony had taken considerable time. His father and brother had been home more than an hour when he arrived. He expected to find them in bed. Instead, he was surprised to see a light in the living room. When he opened the door he sensed the fact that they were waiting for him.

"Why the reception committee, gentlemen?" he inquired pleasantly.

"Where you been?" T. P. demanded.

"Oh," the boy shrugged noncommittally. "Out skylarking around."

"Out skylarking around, huh?" His father had a face like a thundercloud. "Well sky lark up here! We've got something to show you."

Tommy followed them up to his room. T. P. produced the old lantern.

"I suppose you don't know where we found this?" he asked anxiously.

Tommy stared at the old lantern and at T. P. He had heard nothing about the hold-up.

"The last time I saw it," he said, "it was hanging out in the garage."

"Don't lie to me, boy!" A deeper emotion than anger was in the engineer's bass voice.

"Why should I lie to you?"

"Listen, son! The express was held up tonight and this lantern was used to flag it."

Tommy gasped: "Express held up—this lantern used to flag it!"

"Yes."

"I see," he said coldly. "And you think I did the flagging."

He had an alibi if he had seen fit to use it. He had been with Lucille Martin all evening. But aware that if it became known where the girl had been, her father would wreak vengeance upon her head, Tommy chivalrously determined to let them go on thinking what they pleased.

He offered no further explanations, and without giving his mother more than a vague hint as to why he was going, packed his grip, hit the trail, and became a boomer railroad man.

THE morning after the attack, Spike Grady had a doctor cut a bullet out of his shoulder—a bullet which had gotten in there, he said, "when my gun went off while I was cleaning it."

The bandit leader—who would hold up no more express trains—had been seen with the Gradys. The law picked up the twins four days later, charged them with taking part in the hold-up.

They came to trial. Frank and T. P. testified against them. The evidence was damaging. The twins were convicted. On promise of leniency, they both squealed. They named other members of the gang, but they did not name Tommy Spradling.

Frank and his father were dumbfounded. From the minute they had found the lantern and caught Tommy apparently without an alibi, they had little doubt that he had been implicated in the hold-up. Now they knew he had not; otherwise the twins would certainly have told it.

So Tommy had *not* lied about the robbery. Maybe he had not lied about the Eldon switch, either. Father and son tried not to condemn themselves; they didn't talk of it at all.

However, at the end of a year, when the postcards which Tommy had mailed to his mother, no two from the same place, ceased coming, and when Mrs. Spradling began to break and her hair to turn a lighter shade of gray, T. P. and Frank did not sleep so soundly nor talk so loudly as they had in the old days; and crows' feet formed around the father's eyes where crows' feet had not been before.

The twins had gone up for five years. They did not serve it. Mike Grady, gambler and river-front politician, had a voice which reached far and carried authority. His voice whispered to the Governor. At the end of three years the twins were pardoned out, and soon they were back in Fort Smith.

This time they did not go about boasting nor threatening. But the evil glint in their hard cold eyes when the Spradlings passed the pool-hall on their way to and from work, sent the gooseflesh crawling, hardened rails though the Spradlings were. Both T. P. and Frank knew that some time, somewhere, the Grady boys would strike for vengeance.

TOMMY tried railroading, but his reference was not satisfactory. From that he turned to other things—the lumber camps of the Northwest, the orange groves of California, the harvest fields of Kansas and the Dakotas.

He was in North Dakota in the summer of his third year when he was stricken with typhoid and malaria; and about the time the Grady Twins came home Tommy was released from the hospital without a thin dime and no place to go.

On a bleak October morning the boy crawled out of a straw stack on a Dakota farm and knew he was going home. He did not know why, but he knew it, just as he had known he was going all the places he had gone during the last fifteen months. He brushed the chaff off his cheap, wrinkled suit, and headed for the railroad track.

Many nights afterward the youth rode a freight into Red Rock from the North, dodged the bulls and went upon the viaduct so he could look over the yards. The terminal had not changed. The same trains were made up on the same tracks. The same cabooses were sitting on the spur by the water-plug.

Old Bill Hanscom's caboose—Tom-

my could tell it by a red rooster on the cupola—was hung on the *Oilfield Merchandise* with the markers burning just as they had been that night three years ago when he had been fired for leaving a switch open.

Not because Bill Hanscom was running her, but because she made good time into Fort Smith, Tommy determined to ride that train home. He dodged the bulls again, hurried around to the west end, and caught her as she was pulling out.

The boy was aware that he had a grilling ride ahead of him with that wind whipping over those tops. He was aware also that there were conductors who would carry him if he had made himself known and asked the favor. His own father might even be wheeling a passenger hog with a nice warm cab and a vacant seat in it, but Tommy was still a little bit independent.

An hour after leaving Red Rock he regretted he had not asked the favor. They were then running through a dense fog which was wetting him like rain. In his weakened condition, Tommy realized this might bring on pneumonia or the chills and fever.

Longingly he watched the lights in Hanscom's cupola window. In the caboose were a red-hot stove and comfortable cushions. The youth determined to go back at the first stop and ask the veteran conductor to carry him. Old Bill had always carried worthy brothers. Surely, even though Tommy had long since lapsed his membership in the B. R. T., the con would carry him.

Their first stop was Dismal Hollow. Here they headed in to meet No. 6 and take water. Tommy hurried to the caboose. Conductor Hanscom was working on reports at the table. He turned to stare coldly.

"Get the hell outa here!" he barked. "This ain't no place—" He hushed and stared. "You!"

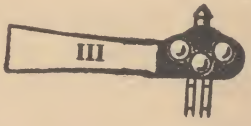
Tommy grinned. "Yes, sir, Mr. Hanscom, a case of the bad penny—"

"Well, bad-penny yourself outa here and stay out! This ain't no place for bums."

"But, Mr. Hanscom—"

"Don't *mister* me! You get off this caboose and off this train. I lost thirty days on account of you. Get out!"

Tommy backed from the caboose and started toward the engine. The conductor followed, kept him off the train, which ran out and left him stranded here at a blind siding.



The Devil's Tombstone

AS HAS been mentioned, towering limestone cliffs overhung the tracks along Dismal Hollow. Most of them were solid in structure, but at intervals five slabs had broken off from the main cliff, probably centuries ago, and hung now like leaning towers or walls ready to topple. Gandy dancers kept constant watch on them, and as they appeared to become dangerous to traffic blasted down the danger spots and carted them away to use for rip-rap.

While Tommy had been working, one of these masses had broken loose and filled the right-of-way full of boulders, almost wrecking a freight train. Local authorities had then taken the matter up with higher officials, asking appropriations to remove the rest before another did turn loose and bury a train.

Higher officials had put them off.

The work would have been expensive. A "shoo-fly" would have had to be thrown out into the valley to carry the tracks around the spot while they were doing the work. There would have been many trainloads of material to haul away. So they had compromised by postponing the work for a time, but had rigged up a short block system to protect their traffic.

The lights of this system were arranged with a home and a distant sign in either direction. Both of the lights shone green, but if the circuit should be broken by the fall of any of these masses the distant light would show yellow, the home signal red.

The biggest and most dangerous-looking of these slabs was near the middle of the passing track. The men called it the Devil's Tombstone. From its foot a clear spring came up from the earth and sent a branch whispering through a culvert under the tracks. In the ravine which separated it from the bluff below, was a clump of cedar trees; and to the east was a beetling cliff under whose sheltering overhang bums often built jungle fires.

Tommy headed for this spot, intending to build a fire and wait until the next freight ran. Guided by the almost imperceptible sound of the spring branch running through the culvert, he turned left, and started into the ravine to gather sticks for his fire.

As he entered the ravine, he saw a halo of light in the fog behind the Devil's Tombstone. At first he thought it was the glow from a hobo jungle fire, but a second later he knew it was a flashlight. Wondering what anyone would be doing at the foot of the Devil's Tombstone at midnight with a flashlight the boy eased over a boulder and took a peep.

Two men were squatted on the ground facing the back side of the slab. They appeared to be tying loose wire ends together and wrapping them; and out there in plain sight was a black box which looked like an automobile battery. Through the fog Tommy could not see too clearly, but the box and wire resembled equipment which he himself had used not long ago in highway work to set off dynamite charges.

He knew that gandy dancers would not be out working at this time of night and that no one else had any business shooting off dynamite along the railroad tracks.

The men raised up and stood with their backs toward him. Tommy gave a start of surprise. He had, of course, read in the newspapers of the conviction of the Grady Twins, but had not been informed that crooked politicians had turned them loose to prey on the public; but if that wasn't Spike and Bolger there was something wrong with his eyes.

The twins lighted cigarettes. Bolger picked up a flashlight and held it to his vest pocket.

"What time is it?" Spike asked.

"Twelve-fifteen."

"We've got to move around here," said the other. "They're due in thirty minutes."

"Don't get nervous, kid. We've only got two more to fix."

The twins threw away their glowing stubs and returned to work.

TOMMY'S thoughts were racing. A train was due at 12.45. *Somebody* was on it, somebody with whom Bolger Grady would get even. Bolger Grady had gotten even with him three years ago. That he had never proven, but he felt sure of it. Now, shots tamped, wires connected, Bolger would be waiting by a battery box.

Blast of the whistle, roar of exhaust, headlight plowing through the fog, locomotive hurtling fifty miles an hour down the straight track, and the Devil's Tombstone tumbling down.

Railroad wrecks are not nice things to clear away. The hogger's boy had seen them. He slipped from his boulder, felt his way into the track, and went stumbling toward the telephone box by the water tank.

It took time—time to run that quarter mile through the murky darkness, time to find the box and a bar of iron to smash the lock on it.

The dispatcher was sending an order, but Tommy did not wait for him to finish. He called:

"Hello! Hello! Hello, dispatcher!"

"Well!" the tone was full of venom. Dispatchers do not like to be disturbed when they're transmitting.

"Listen!" Tommy tried to speak quietly. "I'm calling from Dismal Hollow—"

"Who—"

"I'm not working for the railroad, but I've got something to tell you. The Grady Twins are here at Dismal Hollow—"

"The Grady Twins!" The exclamation came like a pistol shot.

"Yes. They've loaded the base of the Devil's Tombstone, and they are all set to shoot it down at twelve forty-five!"

"Twelve forty-five!" My God! That's the *Capitol Express*. There's a hundred people—"

Tommy could hear the dispatcher breathing—two, three, four short breaths. Then: "Stand by! I may need you!" The dispatcher called Green River.

"Number Seven by?" he queried.

"Just gone. Fixing to—"

"Hello! Hello! Dismal Hollow!" He was calling Tommy again, and after Tommy answered the dispatcher inquired: "How well do you know the lay of the land down there?"

"I used to brake on this division."

"Good! Listen! Get what I tell you! Number Seven's due there in nineteen minutes. That's time enough, if you'll hurry. You beat it right back up there and get a flag out and stop them. Have you got a light of any kind?"

"Not a sign of one, but if I make it I can grab the switch light and use it."

"Atta boy! Now scram! We'll head off the damned crooks now, and if we ever get them behind bars again—"

TOMMY slammed the receiver on the hook and raced toward the Devil's Tombstone. He expected to get by them without difficulty; but when he neared it he saw the flashlight brightening the fog down on the tracks.

He slowed, edged in next the bluff where the moss would break the sound of his footsteps. Moving cautiously, he approached to within a hundred feet of them. They had brought their firing battery down from behind the Tombstone and set it in an alcove where rocks from the blast would not fall upon them. Now they were connecting the wires, getting ready to shoot.

Tommy had not anticipated that. He had expected them to go high on the cliff behind to do their shooting. With them down in the valley, with the cliff on one side and the river on the other, the ex-brakeman could not pass them.

He listened to the gurgle of the water in the swollen river lapping at the grade to the north. The twins fastened the wires to the terminals, fumbled with the switch, and left it posed where a touch would send it down to make the contacts.

HIGH-IRON SPEED

I used to think when I'd retire,
With nothing else to do,
I'd tell of fast runs I had made,
And I have made a few;
Runs that would open peoples' eyes
In wonder and amaze,
But they look cheap, compared to those
They're making nowadays.

If we took water twice, and coal,
And wheeled them down the line
In five hours flat, just think of that,
We thought the run was fine;
But now they take them down in three,
And don't half try, they say,
And never stop for water, lunch,
Or coal upon the way.

—T. P. Whelan in The Railroad Employee.

Bolger looked at the watch again. "Eight minutes," he said.

"We've waited a long time for this," Spike muttered in reply.

"We won't wait much longer."

Again each lighted a cigarette, smoked a few puffs, tossed it aside and lighted another.

Far up the hill a locomotive whistle blew a crossing blast. Tommy's throat tightened. There had not been any doubt in his mind who was on that engine. He knew that Spradling testimony had helped to convict the Grady twins. That peculiar blast—the way his father always put the English on it—froze the blood in his veins.

Bolger Grady was saying: "That's them all right! Damn their tough hides! Six minutes more—"

They were standing by the battery box, playing their flashlight on the spring of water welling up from beneath the Devil's Tombstone.

Tommy was in the darkness in back of them. He reached down to the foot of the cliff and picked up a limestone rock as big as a grapefruit. He lifted it, picked up another.

"Not much against automatics," he told himself. "But they may turn the trick."

He crept nearer. Fifty feet away he stopped. A turn of that flashlight would spot him, make him a target for their deadly fire. He hoped the flashlight would not turn; it was still playing on the spring.

Spike Grady said: "Let's get one final drink before we shoot it down."

There was plenty of time. T. P. Spradling was blowing now for the crossing four miles away. Spike went first. Bolger followed.

Then Tommy saw his chance. He realized that if he could only make it to the battery box while they were gone, pull a wire, and sneak away unseen, their circuit would be broken. Then when they pulled their switch their charges would not fire.

Stealthily he followed as the twins walked toward the spring. Spike laid down the flashlight and knelt to drink. He was halfway to the box then. Spike got up and Bolger knelt. By that time, two steps separated him from his goal.

Intent on it and the men at the spring, Tommy missed a stop on the gravel ballast.

Spike whirled in sudden terror and croaked: "What was that?"

Bolger leaped to his feet, tugging frantically at a holster. Both men were rushing Tommy Spradling. He could not get away. His mind was fixed now upon that little wire. He lunged for it.

The automatic pistol barked twice. Tommy's reaching arm went down instead of out. It did not find the wire. The limp hand fell upon the switch.

The earth reeled under the roar of a terrific explosion. As from afar off, Tommy heard the clatter as of a million mountains falling, heard the loud blast of a locomotive whistle blowing for

a station. Pain stabbed like a knife.

He waited for the Gradys to come on. He was still waiting vainly when the darkness fell.

T. P. SPRADLING was in his cab window. Wind of speed was whipping the red bandana back over his shoulders. His eyes with new wrinkles forming about them were peering into the fog.

Two nights ago, when he had passed the pool hall on his way to work, the Grady twins had been hovering there like vultures. He thought about them. Then he thought wistfully about his son whose fate had been so strangely intertwined with theirs.

"I'd like to know what's become of the kid," he called across to Frank, who was watching from the left.

"A-a-a-a, no telling," Frank called back. "He'll be showin' up one of these days when he gets tired runnin' around."

"I've always wished— Wait a minute! What's this! *Wait a minute!*"

A light was showing yellow on the semaphore—the light which warned of danger from the falling rocks. For years T. P. had seen that light glow green and passed it by. He eased his throttle now, whistled his answer to a caution signal, sloughed his air, and prepared to stop if the other block was red.

It was. He called his flag. The porter came and walked ahead along the track, with T. P. bringing the train behind him.

At the mildle of the passing track, the porter came running to meet him, swinging him down T. P. climbed out of his cab. The porter's eyes were white and wide.

"The Debbil's Tombstone, Mr. Spradling!" he was saying. "The Debbil's Tombstone done fall down and daid men all around it."

"The Devil's Tombstone—"

T. P. passed the porter and hurried down. He found Spike Grady first, writhing and moaning in agony, half buried beneath the deadfall which he had fixed for the Spradlings. Down by the battery box he found his son sprawled senseless in the ditch, two slugs in the right shoulder.

LIFE'S SHORT JOURNEY

Life is like a journey
Taken on a train,
With a pair of travelers
At each window pane.
I may sit beside you
All the journey through
Or I may sit elsewhere,
Never knowing you.
But if fate should mark me
To sit by your side,
Let's be pleasant travelers;
It's so short a ride.

—Erie R. R. Magazine.

THEY did not tell Tommy Spradling the news for a couple of days. He was out of danger then and trying to eat up the hospital. T. P., Frank, Conductor Hanscom and Trainmaster Spofford all came filing in together, looking very sheepish.

Usually Spofford had plenty to say and knew how to say it. That morning, he had an awful time getting it out. Finally:

"We fellows," he said, "all kind of feel as if we owe you—well, sort of apology, kid. Is that right, fellows?"

"Right, Mr. Spofford," T. P. growled.

"And how!" Frank put in.

Tommy had a hunch then what they were driving at, but he did not try to help them.

"You see," the trainmaster con-

tinued, "we've recently uncovered evidence which clears you of responsibility in the Eldon switch case—"

"Really! And proves I'm not a damn liar and a train wrecker?"

"If you want to put it that way, yes." Spofford met his eyes this time. "Spike Grady spilled the beans a couple of hours before he checked out. Seems like him an' Bolger—"

"I tried to tell you guys that somebody had opened the switch."

The trainmaster paused in confusion and then went on: "Well, that clears your record. So far as the company is concerned, they'll make you a nice settlement and return you to work with full seniority just as soon—"

Tommy cut in eagerly: "That suits me fine, Mr. Spofford. Thanks a lot! I never did feel very good about losing that job." He smiled at his father. "I reckon railroading runs in the blood, me being a hogger's boy."

Saved by a Flash of Lightning

BEFORE the time of the air-brake an engineer had to depend almost entirely on the brakemen to stop his train. Life in those days was one of thrills and narrow escapes. For instance:

Forty years ago I was a brakeman on the Lehigh Valley. It had been storming for hours. We were called about 11 p. m. to take a mixed train of freight over the mountain. Howling wind and crashing thunder could be heard above the roar of the train. Flashes of lightning lit up the surrounding country almost continuously as our engines, one ahead and a pusher behind, snorted their way up the heavy grade.

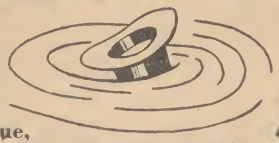
I was making my way back from the engine over the tops of the cars so as to be in position to give the proper signals when the pusher engine was disconnected, when wind blew my lantern out. In the darkness I felt for the brake-wheel and, keeping hold of it, jumped to the next car. It was partly guess work in the dark, but I was used to it and felt sure-footed.

As I was feeling my way along, I took hold of the brake-wheel on top of a large cattle car. I was just about to make the jump to the next car when a flash of lightning revealed that the following car was not coupled to the car I was on. At that moment it was several feet away; the train had just broken in two!

I clutched the brake-wheel desperately and in an instant I felt the jolt as the pusher bumped the two cars together. But for the timely flash I would have fallen to sure death. We made the run without further mishap, but I have often thought of the Guardian Angel who timed that flash.—F. C. Ledyard (as told to J. H. Dickerson.)

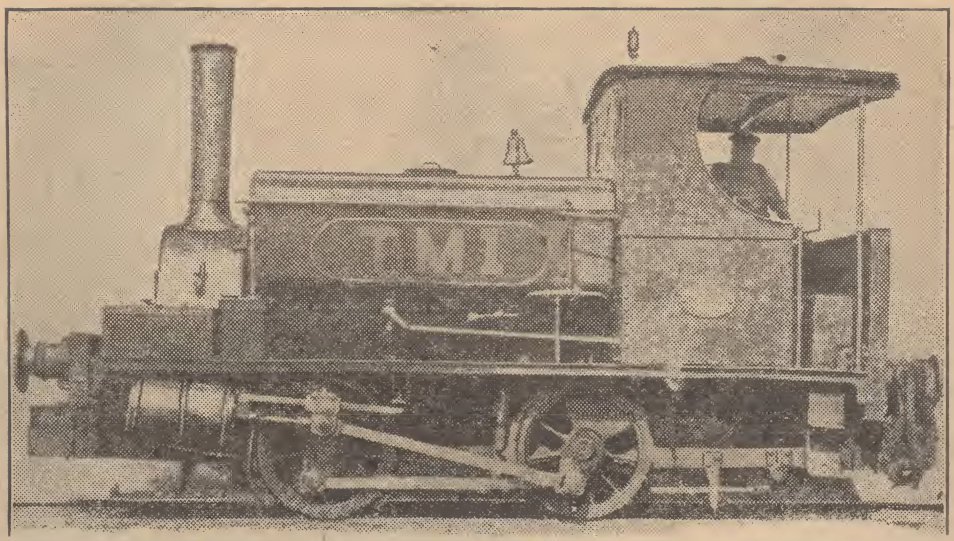
MISSING!

● You're missing full shaving comfort if you're not using Star Blades! Made since 1880 by the inventors of the original safety razor, every Star Single-edge Blade has a keen, true, long-life edge 100% uniform. Star Blade Div., Bklyn., N.Y.



FOR GEM AND EVER-READY RAZORS

STAR Blades 4 FOR 10¢



Built by T. Green & Sons of London, in 1892, This Little Switcher Is Used on the Docks at Callao, Peru. Photo by Fred Jukes

Peru's Railway Stamps

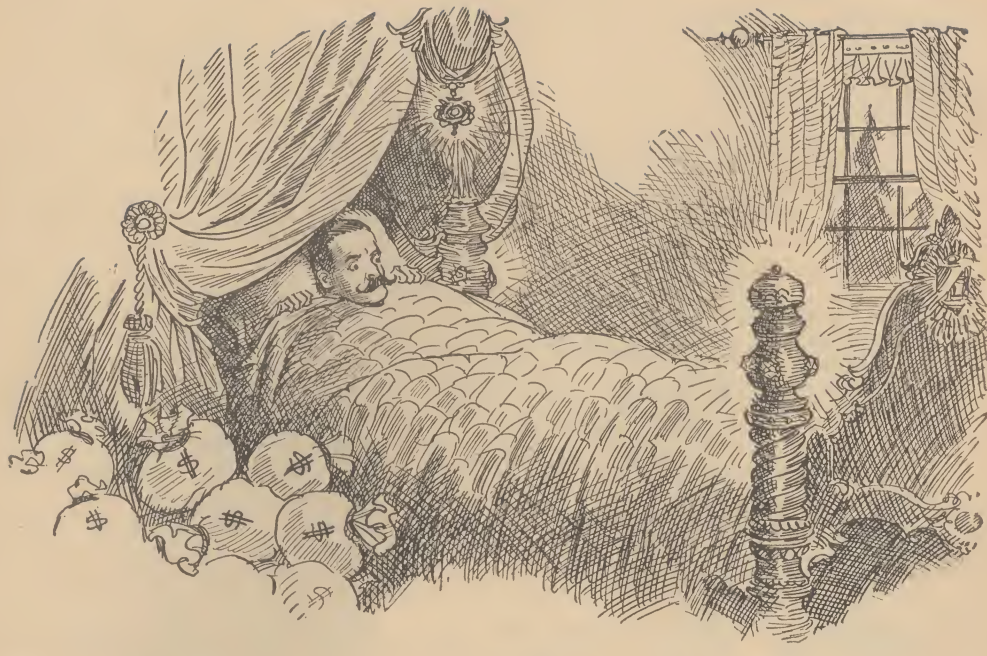
THE railway conquest of Peru is a magnificent tribute to the ingenuity of man in crossing the lofty ranges of the Andes by rail, enabling passengers and freight to get to the interior cities more quickly. Among the postage stamps of Peru are several commemorating this achievement. One of them, issued a few months ago, is an air-mail stamp picturing the earliest locomotive in South America, "La Callao," which began running in 1851. This little 4-4-0 was not, however, the first iron horse to be depicted on a Peruvian stamp. As a matter of fact, Peru was the first nation outside of North America to show a locomotive on a postage stamp.

In April, 1871, a five-cent engine-picture stamp was issued to pay the postage between the cities of Chorillos, Lima and Callao. The names of those cities, which appear at the sides and top of the stamp, have no reference to the engine builder. The Lima Locomotive Works is located in Lima, Ohio, U.S.A.; it has nothing to do with Peru, although the word Lima is printed immediately above the crude-looking engine pictured on this stamp—a type similar to the power on the old London & North Western Railway.

In 1925, after a lapse of more than fifty years, another locomotive appeared on a Peruvian stamp. At the height of its dispute with Chile over the Tacna-Arica territory, Peru raised the money necessary to pay for a plebiscite (popular vote) by issuing a set of special stamps which picture the famous Rock of Arica towering over the city of that name. In the right foreground can be seen a train of the Tacna-Arica Railway, a British-owned company. Altogether eleven stamps of this and similar designs were circulated until the dispute was settled in July, 1929.

In January, 1937, the land of the Incas issued one of the most interesting of the many railway stamps that have been produced by the nations of the world. It shows the La Cima section of the Peruvian Central Railway. Here, high in the snow-covered Andes, the rails reach the loftiest point touched by any standard-gage line—15,806 feet—missing by a scant eleven feet the honor of first place held by the narrow-gage Antofogasta & Bolivia Railway. Nevertheless, of the ten highest altitudes reached by the railways of the world, five of them are in Peru. Even the Manitou & Pike's Peak standard-gage cog railway in Colorado, U.S.A., reaches only 14,147 feet.

The Peruvians have a railway mail service similar to ours. Among the interesting cancellations found on Peruvian stamps are those of the mail cars. As is usual in Latin American countries, the word "ferrocarril" (railroad) is used on such cancellations. In addition, there is usually the train number and date. Thus Peru offers a thrill to the collector who considers that a stamp bearing a railway cancellation has probably come over the highest summits that a locomotive whistle shrieks on.—Winthrop S. Boggs.



George Gould's Transcontinental Dream

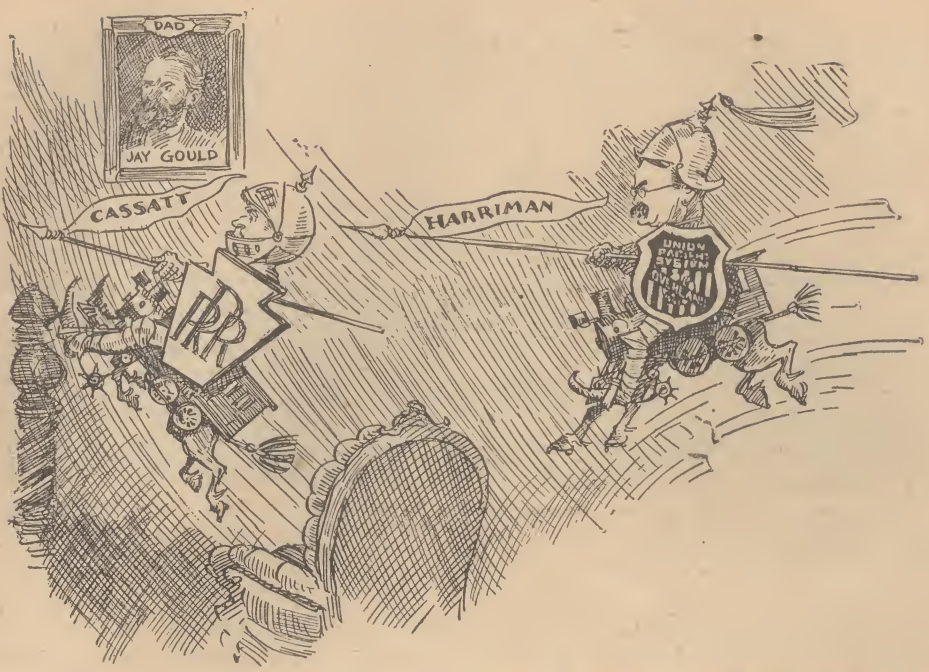
By H. R. EDWARDS

Author of Biographical Sketches of Jay Gould, E. H. Harriman, etc.

GEORGE J. GOULD did not sleep well in his $25,000 bedstead at Lakewood, N. J. That was not because of any defect in the bedstead, which was solidly and comfortably built; nor was anything wrong with the downy feather mattress or the silken coverings or with the balmy fragrance of pine forest that swept through Georgian Court, his summer mansion near the Jersey coast.

One who knows the story of *how* his father had piled up a hundred million might be inclined to think that George's slumber was disturbed by remorse. For Jay Gould had been a railroad wrecker. His great fortune, said the *New York World,* had been "built upon the ruin of his early benefactors, and increased beyond the dream of avarice by the remorseless sacrifice of later associates and friends," and the *World* predicted: "Ten thousand ruined men will curse the dead man's memory."

No, Jay Gould's heir could have slept in serenity for all the ghosts of ruined men. The Gould conscience was quite elastic in that respect. The vision that did come to him, however, in that luxurious bedstead, haunting him night and day, was the vision of a Gould railroad system that extended from the Golden Gate to the



Atlantic seaboard. It was this vision, and the troubles attending it, that gave him many a sleepless night.

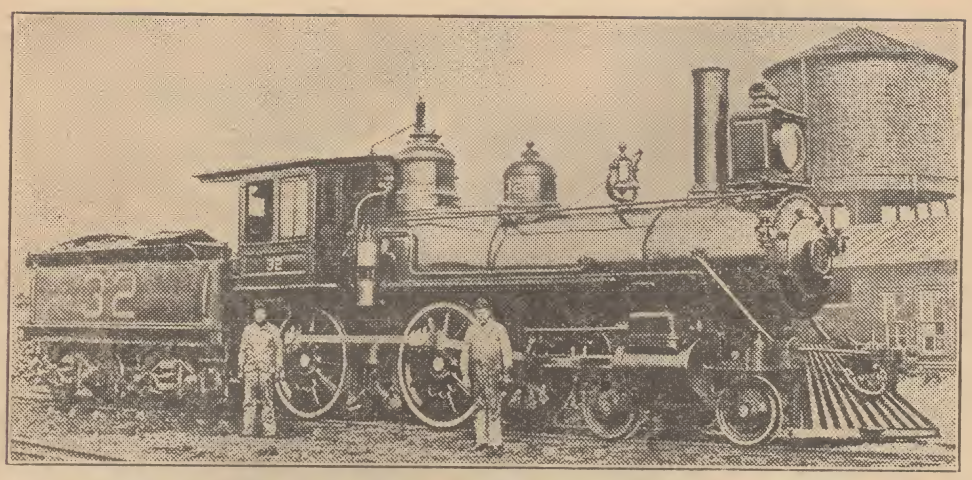
It was a monumental ambition. Even *Jay* Gould, with all of his cunning and power and wealth, had failed in such a project. But George was determined to succeed. In 1892, when he was 28, his father had died and left him in absolute control of nearly 6000 miles of railroad. Soon the young Gould had five big roads under his thumb—the Missouri Pacific, the Wabash, the Texas & Pacific, the St. Louis Southwestern, and the International & Great Northern.

Then came expansion. George started to build the Western Pacific and took over the Denver & Rio Grande, the Western Maryland, and the Wheeling & Lake Erie. The prize—a transcontinental railroad system—was almost within his grasp. Could he link up all of these roads, or would he be blocked in extending the W. & L. E. to Pittsburgh, Pa.?

Until the turn of the century the Pennsylvania Railroad had Pittsburgh sewed up tighter than a drum. Pittsburgh's tonnage of coal, ore, and iron exceeded that of any other three cities in America and was more profitable than the movement of the entire cotton crop of the South. It was the biggest single factor in the greatness of the Pennsy System.

Those seventy-five million tons of Pittsburgh freight which rolled out annually along the lines of the Pennsy constituted perhaps the choicest freight monopoly in the entire history of American railroading. No wonder the Pennsy had been careful to gain control of all the railroads penetrating that region. That is, with the exception of the Pittsburgh & Lake Erie, which was part of the Vanderbilt System, and the Bessemer Railroad, owned by the U. S. Steel Corporation, which hauled iron ore from Lake Erie to the Homestead Steel Works. Both of these pikes allied themselves with the Pennsylvania, however, when the time came for a showdown with George Gould.

From all appearances, the Pennsy stronghold was as unconquerable as Gibraltar. The Smoky City is located in a narrow valley surrounded by steep hills and at the junction of three rivers, the Ohio, the Alleghany, and the Monongahela. Tracks



An Old Eight-Wheeler Which Was Running on the Wheeling & Lake Erie at the Time George Gould Took Over That Road. She Was Built by the New York Locomotive Works at Rome, N. Y. Photo from a Former W.&L.E. Engineer, Frederick M. Westcott, 26 Morningside Park, Rochester, N. Y.

of the Pennsy and its allied lines occupied both banks of all three rivers. Thus every valley offering access to Pittsburgh from the north or east or west was crowded with these tracks, while the southern side of Pittsburgh was guarded by the steep rocky barriers of Mount Washington and Duquesne Heights.

Firmly entrenched like an old-time baron, the Pennsy exacted heavy freight toll from Pittsburgh shippers, ruining many and forcing others to move elsewhere. Alexander J. Cassatt, president of the Pennsy, not only ruled his railroad with a rod of iron but, it is said, controlled the politics of Pittsburgh as well. His prime minister, so to speak, was Clay H. Frick.

Cassatt and Frick smiled complacently when they first heard a rumor that Gould and his Wabash Railroad were planning to enter Pittsburgh.

BUT George J. Gould knew what he was about. He had gone over the whole matter thoroughly with Joseph Ramsey Jr., president of the Wabash. Joe had been born in Pittsburgh, had roamed the surrounding hills as a boy, and knew every foot of the locality like an Indian scout.

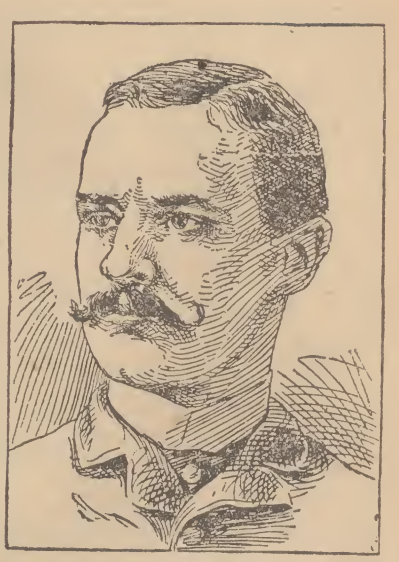
Joe did a lot of figuring. He figured that Pittsburgh was the center of one hundred thousand square miles of coal-producing land and originated enough freight to make the Pennsy the wealthiest railroad in the East. He figured, too, that in one year that portion of the Pennsy earned $16,000 a mile. It was too good for one road to keep to itself.

In 1882, unknown to the Pennsy officials, he surveyed a line to connect his native city with the West. For seventeen years he brooded over the results of this survey, and then he broached the matter to George Gould. Gould was cautious. He knew that such a plan would meet tremendous resistance from the mighty Pennsylvania. He asked: "How much would it cost us to enter Pittsburgh?"

Joe had figured that, too. "At least twenty-five millions," he shot back. "Perhaps more."

Gould blinked. "That's too much," he said. George was more of a railroad builder than his father had been, but he had plenty of other safe uses for twenty-five millions.

The Pennsy monopoly of Pittsburgh seemed impregnable to Gould from every angle. It was the Pennsy which had built the first all-rail line from the Atlantic sea-



George J. Gould (1864-1923), as He Looked at the Time of His War with the Pennsy, and His New York City Mansion at 857 Fifth Avenue, Facing Central Park

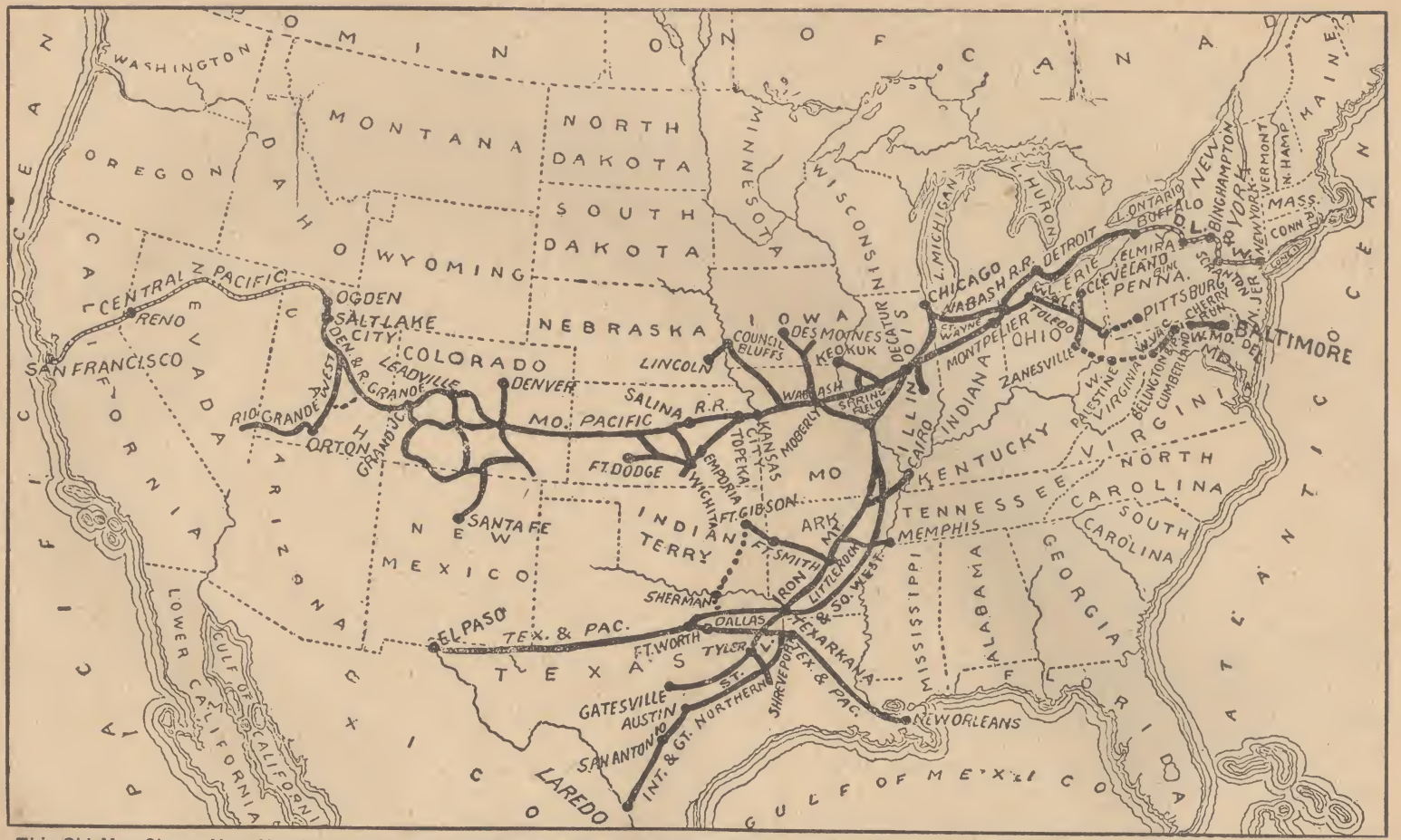
board to Pittsburgh, opening it December 10th, 1852, and thus supplanting the old Portage Railroad which took three days and nineteen hours for the journey between Philadelphia and Pittsburgh. From that beginning the Pennsy had gradually tightened its hold on the city of Pittsburgh until, in the prosperity years of 1900 and 1901, the total number of empty cars which could be thrown into that region was hopelessly inadequate to meet the demand. So acute was the car shortage that in one thriving town near Pittsburgh the residents were denied the privilege of seeing a traveling circus because the Pennsy could not spare cars to haul the circus equipment and livestock.

Freight service in and around Pittsburgh collapsed like a punctured balloon. Freight yards and sidings were jammed with cars that couldn't be moved. Crews worked to the limit in a futile effort to break the jam, as a vast flood of goods came from mines, factories, mills and farms. In the face of such congestion the manufacturers, mine owners and other industries had to cancel orders and slow down production, throwing thousands of hands out of work.

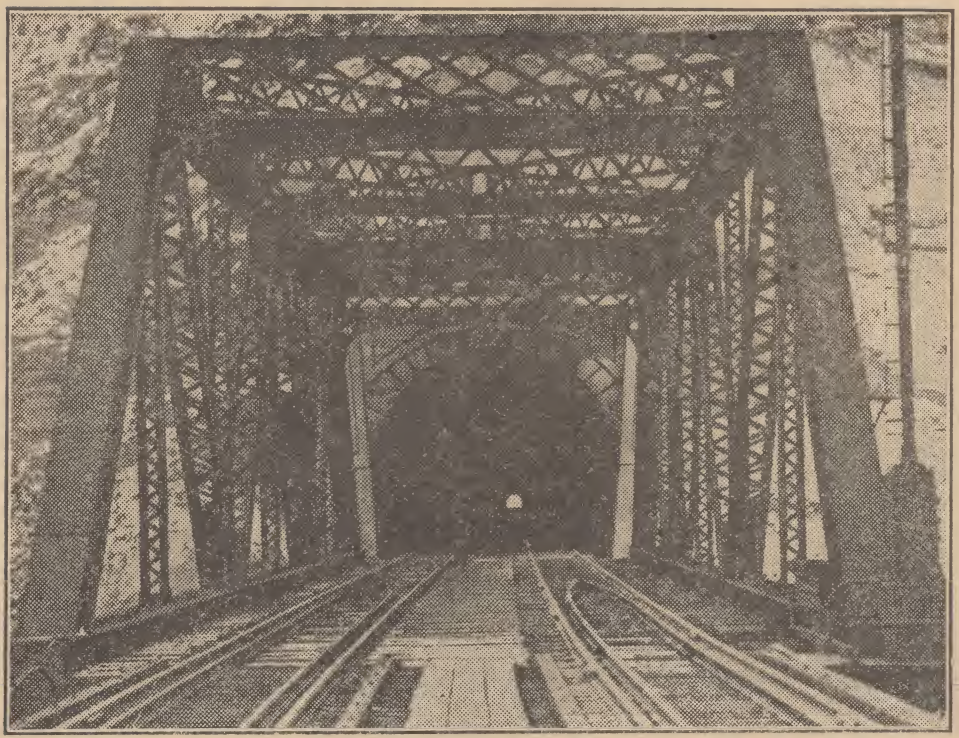
And yet, despite all this, the Pennsy was unwilling to budge an inch toward surrendering its long-held monopoly. But Gould forced the hand of Mr. Alexander J. Cassatt.

Many years before, Congress had authorized the construction of a bridge over the Monongahela River into Pittsburgh. The bridge, however, had not been built, and the rights lapsed by limitation. But George Gould, like his father, maintained a powerful lobby at Washington and succeeded in putting through a bill authorizing the bridge construction in the closing hours of the Fifty-sixth Congress. The rights were to be vested in the Pittsburgh & Mansfield Railroad Company, which, the unsuspecting Congressmen were informed, was merely an interurban trolley line company. The "dummy" president of the trolley company was, unknown to the public, an office boy employed at Gould headquarters.

The so-called P. & M. Railroad Co.



This Old Map Shows How Nearly George Gould Came to Realizing His Coast-to-Coast Dream. Originally It Embraced the Central Pacific, but He Dropped That Idea and Built the Western Pacific Instead. The Dotted Line Southwest from Pittsburgh Is the Wabash Pittsburgh Terminal Road. Gould's Final Link Was to Be with the Western Maryland, but the 1907 Panic Turned His Dream Into a Nightmare



Mt. Washington End of the Monongahela Cantilever Bridge, Showing One of the Twenty Tunnels Which Had to Be Bored Before the Sixty-Mile Wabash Pittsburgh Terminal Railroad Could Link the W.&L.E. with the Smoky City

erected two small piers in Monongahela and Pittsburgh respectively, each large enough for a trolley bridge, as a gesture; and the Pittsburgh & Mansfield project thereafter turned up its toes and died.

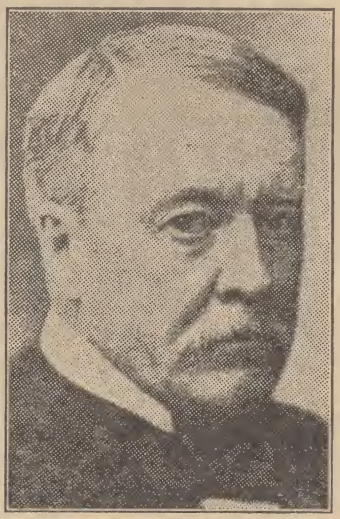
Meanwhile, Joe Ramsey had obtained Gould's assent to his daring plan by first getting the coöperation of Andrew Carnegie. Carnegie was already on the outs with the Pennsy, by reason of a fight of years' standing against "exorbitant" freight rates, and was quite ready to sign an agreement to the effect that, if the Wabash could be brought into Pittsburgh, he would let the Wabash haul twenty-five per cent of the tonnage of the Carnegie Steel Works at Homestead. This and similar agreements from other Pittsburgh industrialists convinced Gould that the proposed entry, costly as it would be, was a lucrative venture.

With this thought in mind, Gould bought control of the Western Maryland, extending from Baltimore to Connellsville, Pa., not far from Pittsburgh. He also acquired the Wheeling & Lake Erie, a single-track line running from Toledo, O., to Wheeling, W. Va. Here, then, was the way the Gould empire stacked up in 1900: with the construction of the Western Pacific, and by means of the Denver & Rio Grande, Missouri Pacific, and Wabash, a through route would be established from San Francisco to Toledo. When the Wheeling & Lake Erie and Western Maryland were finally his, Gould had only to bridge the gap between them to boast a coast-to-coast railroad system.

At Joe Ramsey's suggestion, he authorized building the cutoff from a point near Jewett, O., right into Pittsburgh, at a cost of millions of dollars. Construction gangs were immediately put to work to bore through the hills. The Pennsy officials, who had been caught napping, awoke with a start.

With carefully planned defensive strategy, the Pennsy carried their case to

the courts in Ohio, West Virginia and Pennsylvania, hurling one legal obstacle after another in the way of the advancing line, and making the cost to Gould staggering. As the expense bills mounted skyward, Gould wavered. The nights he spent in that $25,000 bedstead at Lakewood, N. J., were filled with troubled dreams. It looked as if he were beaten.



Alexander J. Cassatt, Big Boss of the Pennsy, Who Fought Gould to the Last Ditch

BUT the wave of national prosperity which had caused a blockade of Pennsy yards at Pittsburgh and an unprecedented car shortage reacted in favor of Gould's scheme. The Smoky City government was largely dominated by the Cassatt interests, but that didn't stop Gould. If money could elect one set of city officials, other money could oust them. And Gould was spending plenty of money, now that victory was in sight. He caused the entry of the new line to be made an issue in the municipal election of 1902, and won a safe majority of votes. A city council favoring Gould's scheme was elected.

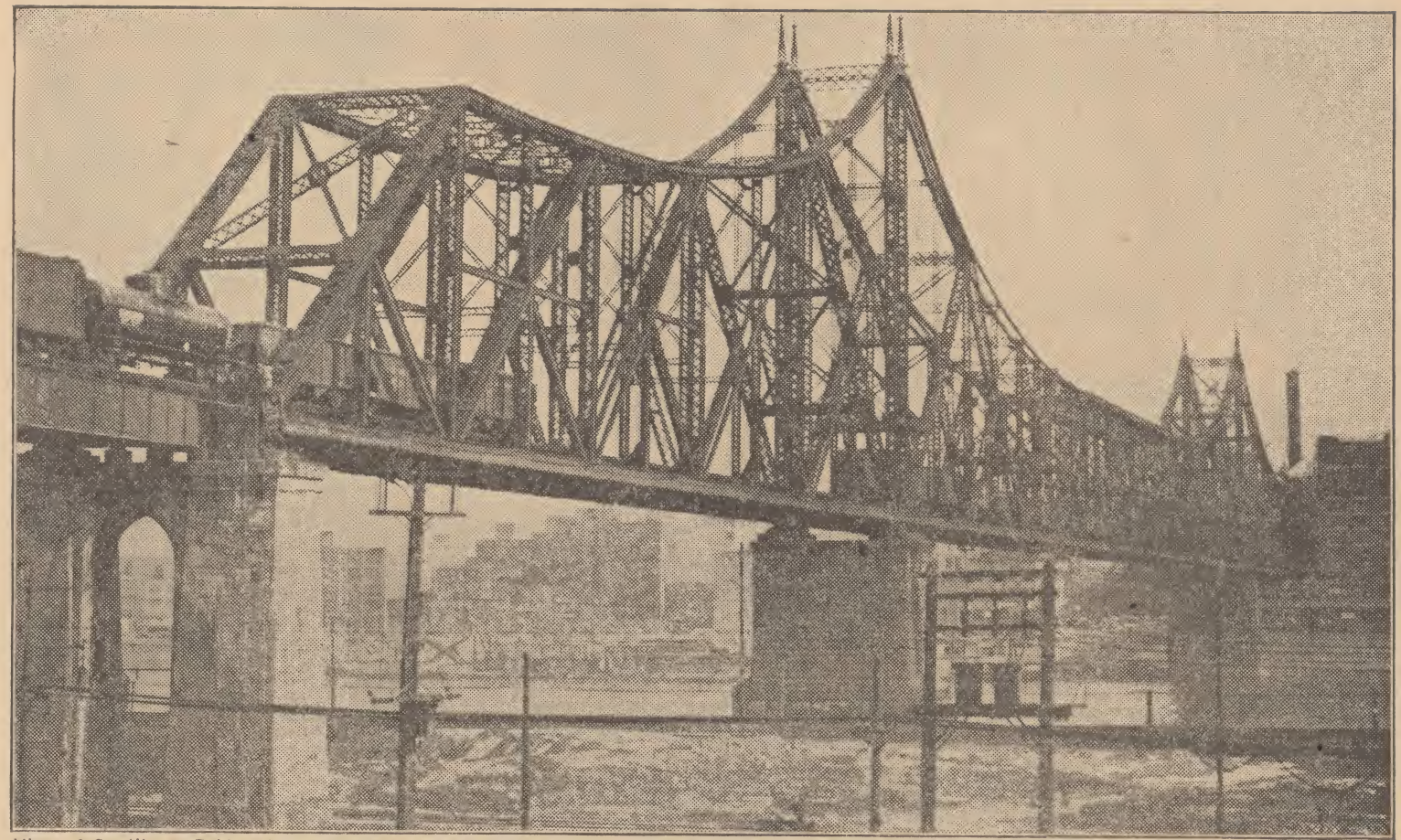
President Cassatt of the Pennsy had lost, and took the loss hard. He wanted revenge. The Western Union Telegraph Company was a Gould corporation, having been handed down to George from his father. Its telegraph lines had been strung along the Pennsy's right-of-way for years, but now the W.U. contract with the Pennsy was about to expire. Mr. Cassatt refused to renew it on any terms, and took his last fling at Gould by sending gangs of men armed with axes out along the Pennsy right-of-way. For thirty-four hours they hacked and chopped at the W. U. telegraph poles, leveling them one by one. Some $50,000 worth of property was thus destroyed; and Cassatt gave the rival Postal Telegraph the coveted franchise. Gould's invasion was slowed up but not halted.

Even with the backing of such money kings as Carnegie, John D. Rockefeller and Russell Sage, it took Gould four years to build sixty miles of railroad from the W. & L. E. near Jewett, O., into Pittsburgh. It was called the Wabash Pittsburgh Terminal. The bills continued to mount up. Soon he exhausted a $20,000,000 fund which had been raised largely by a big insurance company. Then the Wabash treasury was drained, for the new stretch of railroad had to be built through and across hills that hitherto had been considered impregnable. Even rivers had to be shifted from their courses.

In that sixty miles were twenty tunnels and sixty bridges, including one of the finest cantilever bridges of its day across the Monongahela. The partial collapse of the Monongahela bridge killed a score of workmen, while a section of a tunnel collapsed into an abandoned coal mine, causing $40,000 additional expense—these, and floods, landslides, strikes, epidemics among the workmen, and legal difficulties added to Gould's restlessness. However, he refused to be discouraged.

A million-dollar terminal was built for the new road in Pittsburgh near the famous old blockhouse that was the last vestige of Fort Pitt. Workmen building the terminal unearthed relics of historical value. But before it could be used, the W. P. T. had to get around a city ordinance forbidding it to cross the streets of Pittsburgh. This was done by constructing a viaduct which extended over the roofs of houses and other buildings—an additional item of heavy expense.

At last the first train rolled into Pittsburgh, amid popular rejoicing, and Gould



View of Cantilever Bridge Across the Monongahela River, Looking Toward Pittsburgh. This Great Structure Was Built by the Gould Interests About Thirty-five Years Ago as One of the Links in What Was Intended to Be a Transcontinental Rail System

heaved a sigh of relief. His troubles, however, were not yet ended. On account of being obliged to use an elevated structure to enter the city, Gould found that his road was seriously hampered, and could not haul all of the traffic that Carnegie had promised him.

Moreover, the road was largely a *freight* carrier, and yet he had built a costly *passenger* terminal in an out-of-the-way section of the city. Besides all that, the W. P. T. and W. & L. E. terminals were not even double-tracked. Thus Gould had acquired what was commonly regarded as a white elephant—a road into one of the world's busiest traffic centers but with inadequate facilities for handling freight. Incidentally, the W. P. T. is now the Pittsburgh & West Virginia.

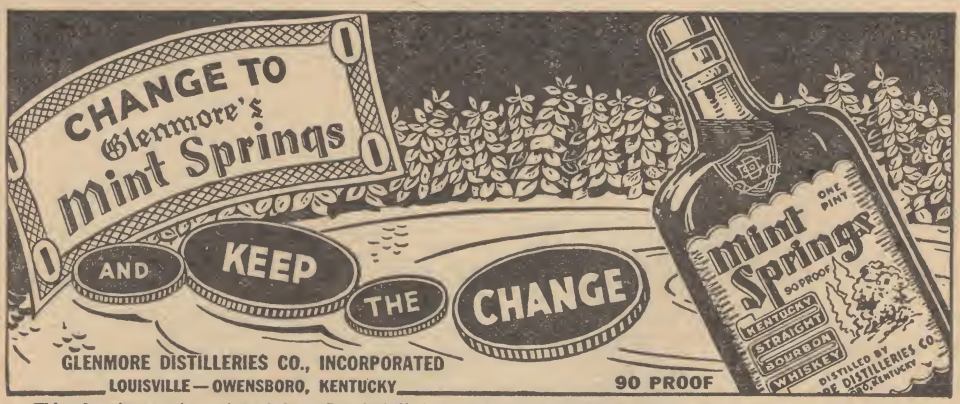
The total cost of building that entry into Pittsburgh ran between thirty-five and forty millions. This huge sum, coupled with sharp clashes with the E. H. Harriman interests in the West, led to George Gould's downfall. The end came fast. One after another his roads had to be thrown into receivership, and the whole of Gould's ambitious structure tottered to a collapse, just as he had been about to connect the final link of his ocean-to-ocean system.

The Gould system never quite became a transcontinental one. His ambitious bubble was pricked by the panic of 1907, the business slump coming just at a time when various state legislatures were getting unpleasantly curious about the conduct of railroads.

On top of that, Gould had antagonized the mighty Ed Harriman, and Ed began to strike back in a silent, relentless fashion. Eventually, in 1908, the Harriman interests took over most of the Gould network of more than 16,000 miles, and it was split up.

Long before Mr. Gould died in France on May 16th, 1923, he had lost control of every unit of this network except the D. & R. G. and the Rio Grande Southern. He had lost even his position as executor of his father's estate, over which old Jay had bequeathed him absolute authority. George was removed in 1917 on a charge of mismanagement that had cost the estate twenty millions. His summer mansion, Georgian Court, was eventually sold to a girls' college.

As for the Pittsburgh monopoly, the Pennsy never did get it back; but the Pyrrhic victory which George J. Gould won in 1902 accounted for a great many of the sleepless nights he spent on that $25,000 bed in the Jersey pines.



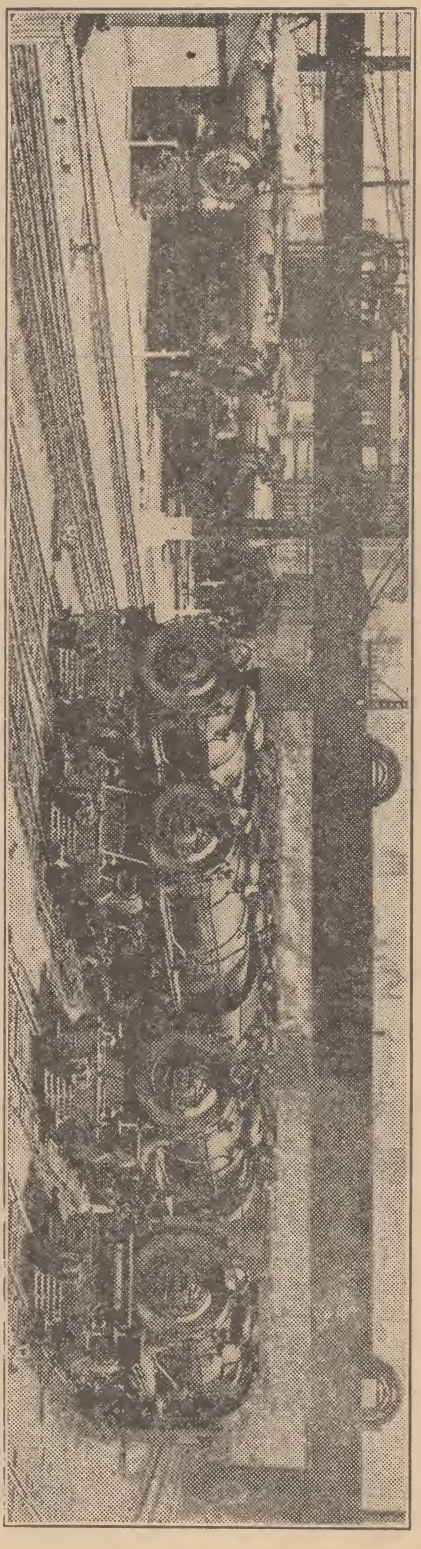
This advertisement is not intended to offer alcoholic beverages for sale or delivery in any state or community where the advertising, sale or use thereof is unlawful.

The Fastest and Longest Fan Excursion

IT'S going to happen on Sunday, May 16th, and it'll be not only the fastest and longest, but, we hope, the finest fan excursion ever operated. The objective of the trip is the great Juniata Shops of the Pennsylvania R. R. at Altoona, Pa., through which the visitors will be escorted, where there will be plenty of engines of all classes to photograph (including the K-5's, the streamlined K-4, and No. 1), and whose testing plant will be in operation especially for the occasion.

Operated under the auspices of this magazine, together with the N. Y. Chapter of the Railway & Locomotive Historical Society and the National Railway Historical Society, the trip's details have been arranged personally by us, and we can guarantee you the time of your life. Instead of an observation car, for example, we're going to have a track inspection car on the rear end. And we're going to equal the schedule of the *Broadway Limited.*

You don't have to be a Philadelphian or a New Yorker to come along. Here's the lineup: The special train will leave New York City at 7.50 a. m. (E. S. T.—8.50 a.m. Daylight Saving Time), Newark at 8.07, N. Philadelphia at 9.16, and Harrisburg at 11.07. There will also be connecting service from Washington (7.45 a.m.) and Baltimore (8.40 a.m.). Round trip fare will be $5.25 from New York City and Newark and $5 from Philadelphia, Washington or Baltimore. But that isn't all. Special cars (and maybe a special train) will be run out of Chicago about 8 p.m. on May 15th, round trip fare on which will be only $8.75. Intermediate stops will be made; if you live along the main line or can get to it and want to come along, get in touch with your nearest P. R. R. ticket office.

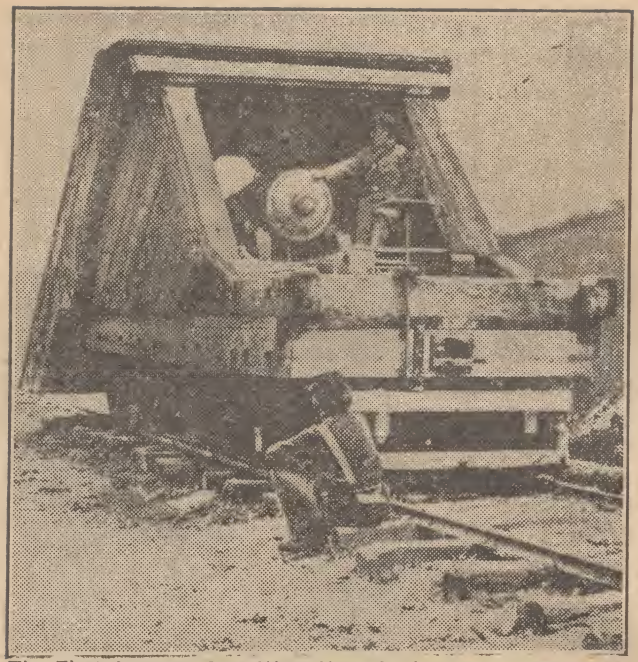


A Group of Pennsy Engines Photographed in Philadelphia Several Years Ago, before the New 30th St. Station Was Built. The Four Engines on the Right Are (from the Left) No. 1647, Atlantic Type (Class E-6); No. 3367, Pacific (Class K-2); No. 612, Pacific (Class K-4), and No. 5700, Ten-Wheeler (Class G-5)

From H. Albrecht and A. M. Rich

American Military Railroads

By Lieutenant FRANK W. EBEY



The First Armored Cars Were Used Against the Confederates in the Civil War. Here Is One of Them, Photographed During a Lull in the Firing

ALTHOUGH the United States army was not the first to recognize the value of railroads as a source of supply and movement, military railroading received its first full test and rose to first rank as a factor to be reckoned with during the American Civil War. Since then the rails have played an important part in every major war the United States has been in, as well as several it hasn't.

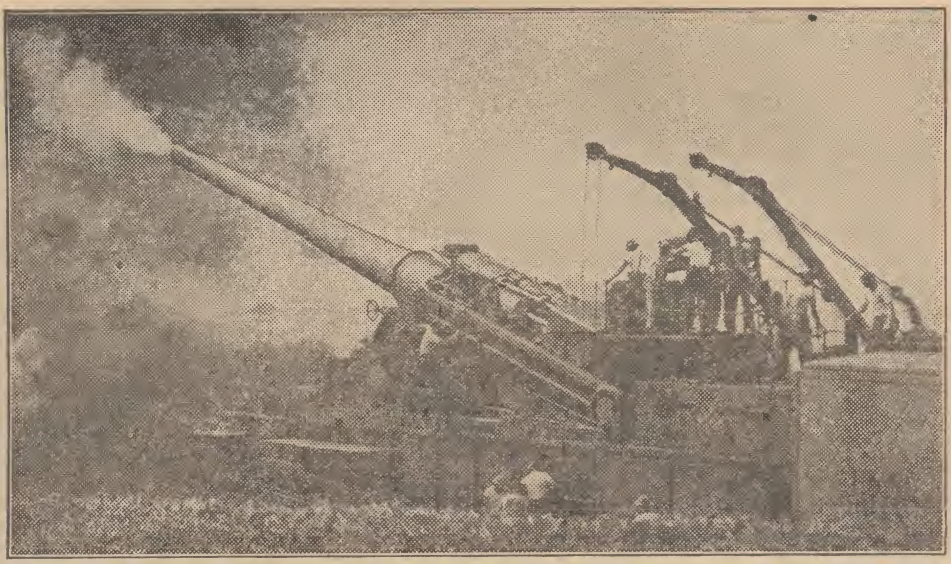
At present the army maintains several railroads at forts and fortresses in the United States and its possessions that are capable of serving military purposes in peace and war.

Strange to say, the first movement of troops by rail was not a wartime movement. It occurred in 1830 when a British regiment was moved thirty-four miles on the Liverpool & Manchester Railway, in the nature of a test. The iron horse acquitted herself well by moving the entire regiment in two hours. As this was ordinarily a two-day march, it was noted by military observers from most of the major armies.

The professional soldier is often accused of being too conservative, but here the value of railway transportation as an important military factor was noted almost with the advent of steam roads. It might be of interest to state that a little over a century later a British regiment changed station on foot during the depth of the depression so as to save the government the cost of transportation.

The first recorded use of railroads in actual warfare was in 1848 in Italy, at the same time American troops were struggling by foot, horse, and wagon over the mountains and deserts of Mexico. Austrians, never backward in the arts of war, had mounted either mortars or howitzers on railroad cars and were moving them up to the bombardment of Venice. The Venetians stymied this attempt by blowing up arches in the railroad viaducts leading to the mainland.

Eleven years later the Austrians and the Italian allies fought over the peninsula again. This time they harassed one another's rail communications, cutting lines of supply by tearing up track, and maneuvering to get on the vulnerable flank of an enemy road. The allies became especially adept at repairing their ruined roadbeds almost as rapidly as the Austrians de-



And This Is a Modern Big Gun, Mounted on a Specially-Built Railroad Car, Blasting a Practice Shot Far Out to Sea from a High Spot on the Panama Railroad

stroyed them. Maybe that explains why Italian immigrants made such good section hands in America.

At the outbreak of the American Civil War in 1861, both sides quickly recognized the strategic value of the iron road. On May 25, 1862, Quartermaster General M. C. Meigs took possession of all railroads of the United States so far as military purposes were concerned. On both sides trains were rushing troops to the Northern Virginia front. A list of battles of the Civil War records a large number of encounters at various railroad stations, especially cavalry action. The cavalry, in addition to being the eyes of the army, had to protect the vulnerable flanks of railroads paralleling the enemy lines, as well as attempt to capture troop and supply trains, destroy bridges, and otherwise harass the enemy.

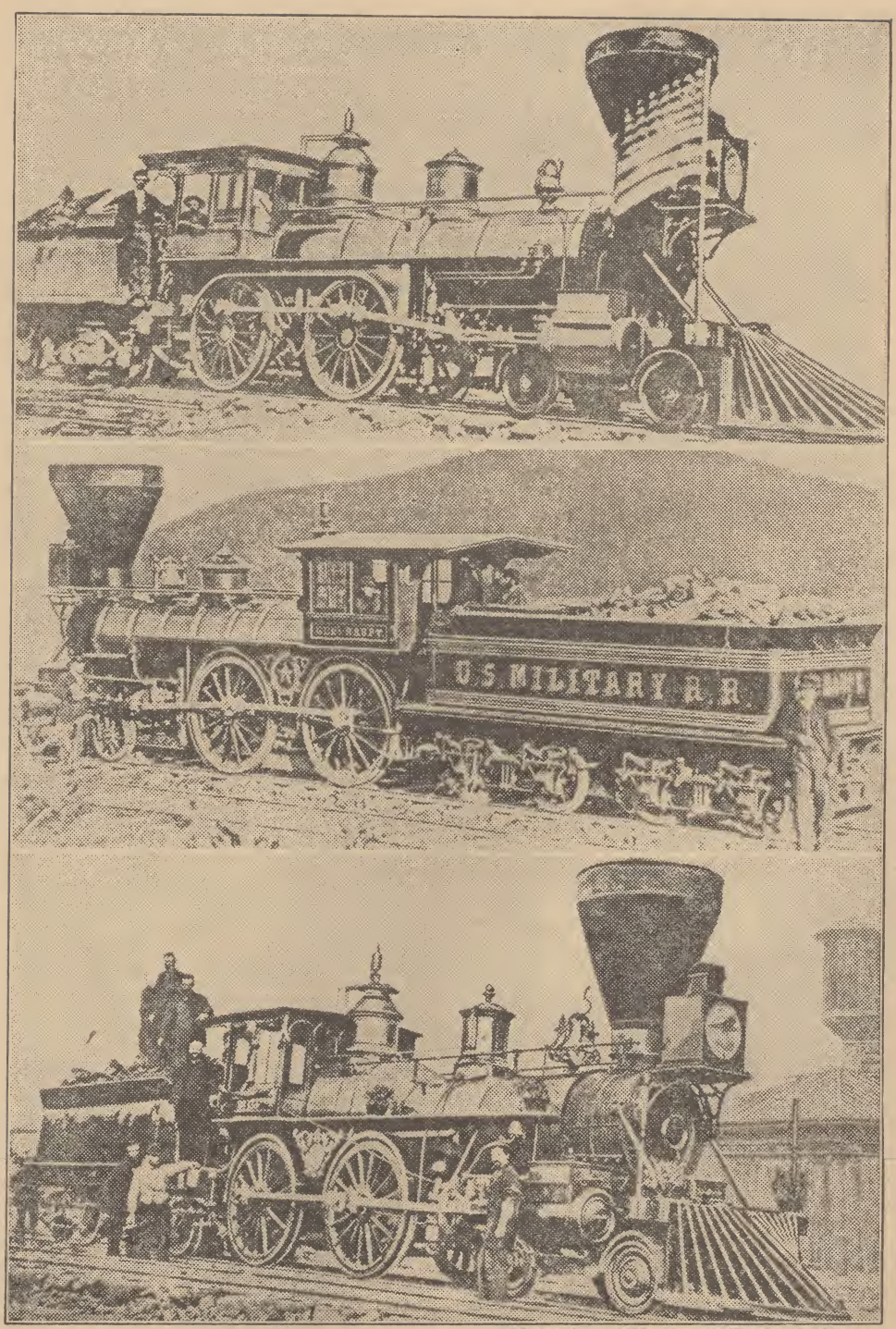
Certain generals—especially on the Union side, where many were originally political appointees—were a bit too enthusiastic about the railways and attempted to control them according to their own ideas. Many of these ideas ran counter to good railroading.

This being the case, the War Department soon recognized the necessity of railroads being run by experienced men. So on February 11, 1862, Colonel D. C. McCallum, former general superintendent of the Erie, was made military director and superintendent of all U. S. railroads.

Colonel McCallum, who was later advanced to the grade of brigadier general, issued an order forbidding officers to interfere with train movements except in case of impending attacks. He further directed that general officers give any orders affecting railroads through the general superintendent. One general was unable to take this gentle hint, so on August 24th, 1862, the General-in-Chief of the Union forces sent the following wire:

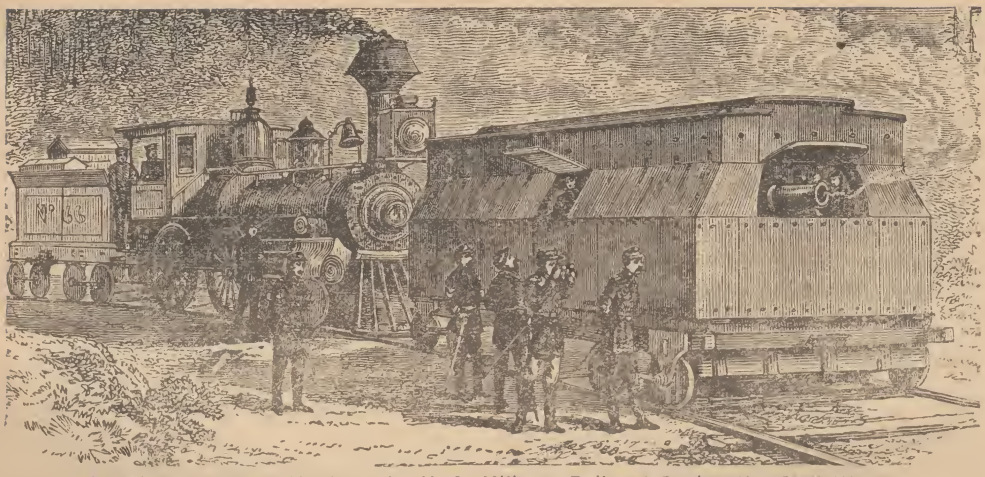
Colonel Haupt:
No military officer has authority to interfere with your control over railroads. Show this to General ———— and if he attempts to interfere I will arrest him.

The same Colonel Haupt to whom this telegram was addressed realized that the North had an advantage over the South in preponderance of railroads and that this fact might well be one of the determining factors of the war. Haupt was worried over the fact that the Confederates had torn up more than a hundred miles of the North



Photos from Collection of Charles B. Chaney

Three U. S. Military Engines of the Civil War: (Top) No. 156, Built by Baldwin; (Center) the "General Haupt," a Mason Engine; and (Bottom), No. 133, Constructed by Danforth of Paterson, N. J.



A Railroad Battery Used by the U. S. Military Railroad During the Civil War

Missouri Railroad (now part of the Wabash) and destroyed forty-eight B. & O. locomotives during the first year of the war, so he organized the Construction Corps of the U. S. army, composed largely of experienced railroaders.

THIS CORPS proved a decisive factor. In the summer of 1863, the troops of General Robert E. Lee destroyed nineteen bridges on the Northern Central Railroad (now part of the Pennsy). The Construction Corps, however, repaired and rebuilt them during the three-day battle of Gettysburg, Pa., and had actually re-established rail and telegraphic communication with Washington and Baltimore by noon on the day of Lee's retreat. This feat caused the saying that "The Yanks can build bridges faster than the Rebs can destroy them."

Later both General Sherman and his Confederate opponent, Johnson, gave testimony to the effect that the Corp's work in opening and maintaining lines of supply and communication enabled Sherman to make his widely-heralded march to the sea.

The Construction Corps served also as a destructive agent. Early in the war a young engineer officer decided that merely heating rails and bending them around trees was not efficient because, crooked as they were, such rails were easily straightened out. Accordingly he invented a U-shaped set of claws. These were inserted under each end of a rail, and the rail was torn up and corkscrewed by means of ropes and levers. This young engineer worked out an efficient system of destroying a mile of railroad in one hour with a battalion of 440 men.

In 1862 the railroad was used as a purely offensive weapon for the first time. It was an armor-clad flat car that mounted heavy armament as well as providing shelter and loopholes for riflemen. This pioneer railway artillery piece was built in the shops of the Atlantic & North Carolina (now Norfolk Southern) at New Bern, N. C., soon after the capture of that city by the boys in blue.

Other armored cars followed, and a very heavy armor-clad car known as the Union Railroad Battery was used in connection with springing the gigantic mine before Petersburg, Va., in 1864. This car could be run up and down the line, making it far more mobile than any previous piece of artillery and bringing fire on any near portion of the Confederate line that Grant wished.

In 1864 the railroads received their hardest test and came through satisfactorily when General Schofield's Corps of 15,000 Union troops was transported 1400 miles in eleven days by rail and river from the Tennessee Valley to the Potomac. Long hauls like this impressed upon authorities

the necessity for standard gage, for both economic and military reasons.

An interesting sidelight of the war was a Federal order put out by the Military Division of the Mississippi barring news butchers from all troop trains. Apparently the news butchers were garnering too much hard-earned soldier money as well as putting out super-charged firewater. Another order in this department allowed civilians to ride for eight cents a mile if a ticket was purchased before boarding the train. Otherwise the price was doubled.

In 1864 the Union commander at Memphis, Tenn., put an end to railroad sniping in his district by ordering that local hostages be placed on all engines and in conspicuous positions in all cars "until this murderous practice is desisted from." Among the hostages were certain citizens of Memphis who had publicity applauded the firing upon trains.

The Confederacy, too, early recognized the importance of their railroads and of the trained railroaders who manned them. Southern roads did valiant service in pouring a steady stream of men and supplies to the front. It was when these lines were finally cut at various places—at Vicksburg, Miss., for example—that the backbone of the Confederacy was broken. The writer, himself a Southerner, has touched more on the Union than the Confederate side, only because this article deals primarily with military railroads as related to the United States army.

The Confederacy also had its Construction Corps to repair ruined bridges and raided roadbeds. Its railroad heroes were as resourceful and courageous as their brothers in blue. One of the most stirring tales of the Civil War has to do with the famous Andrews Railroad raid in 1862. The engine *General* of the Georgia State road was stolen by Union spies. The thrilling chase by the Confederates, using all the skill and doggedness in repairing hastily ruined track, has come down to us in song and story—and even in the movies.

One Southern cavalry leader was so impressed with the value of railroads that he used an ordnance train pulled by the iron horse instead of straining mules ahead of a combat wagon.

After the war the Federal Government established a complicated financing plan to reorganize the Southern roads. The Government made no charge for improvements on any road of a solely military nature or for replacements by the military of material and material ravaged by war.

THE lessons of the Civil War, learned by many foreign observers accompanying both armies, established the necessity for the roads being manned by

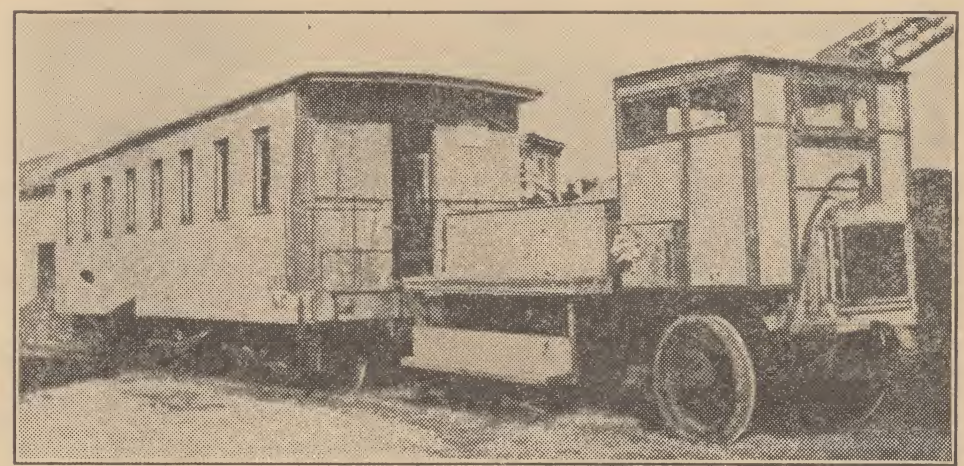


Photo from W. H. Jones, Box 412, Galveston, Texas

Operating between Galveston and the Army Engineers' Shops, This Train Consists of an Old Rebuilt Four-Wheel-Drive Truck and a Home-Made Railroad Car

Drawn from Photo Furnished by Commandant's Office, Ft. Benning, Ga.

The Three-Foot Gage Military Railroad at Ft. Benning, Ga., Which Hauls Troops to Maneuver Areas, Averages about 30 Miles of Track, but It Is Continually Being Torn up and Rebuilt

trained railroaders in time of war. Reports to various war offices gave added impetus to the building of railroads in Europe, some definitely for military purposes, as witness the German roads built to the Belgian border.

In the United States railroads were necessary in the movement of troops and supplies in certain Indian campaigns, the Spanish-American War, and the Mexican border trouble.

During the World War, the railroads played a valiant part in moving men and supplies to the port of embarkation. American railroad guns pounded the enemy lines. American locomotives were shipped abroad, and engineer regiments built the huge yards at Brest, France, astonishing the French with their speed and efficiency. Also, American railroaders kept traffic moving and made repairs on the Trans-Siberian out of Vladivostok during the Siberian expedition following the World War.

Now the U. S. army maintains regiments of railroad artillery belonging to the Coast Artillery Corps. The rifles, mortars, and howitzers, mounted on their especially built cars, may be moved along the coast and across the continent if necessary, providing the heaviest mobile armament available. At certain points tracks are laid with carefully constructed curvature to aid in moving the piece while laying in azimuth. This is the same principle as shifting the trail of a field piece.

At present the army maintains railroads at Fort Monroe, Virginia; Fort Hancock, N. J.; Aberdeen Proving Grounds, Md.; Ft. Belvoir, Va.; Camp Eustis, Va., (abandoned for use as a peacetime station); Ft. Benning, Ga., and Hawaii and the Philippines.

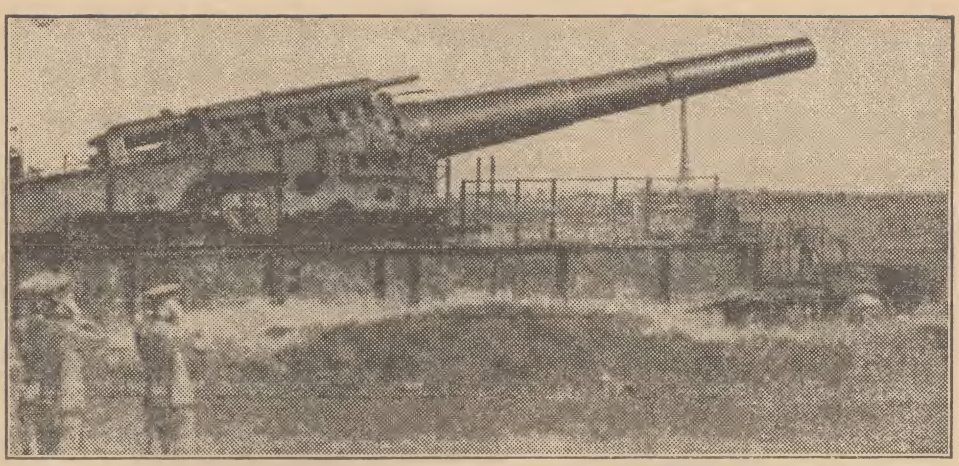
The trackage at Fort Hancock and Fort Monroe are primarily for the railroad artillery and is standard gage. These systems, of course, connect with trunk line roads so that equipment may either be moved in or out as military necessity demands.

Fort Monroe's system is also used for the transportation of troops up and down the sandy stretches of the Chesapeake shoreline. The hot shots at these stations are called by the soldiers "The Coast Artilleryman" and "The Cannonball."

At Ft. Belvoir (formerly Fort Humphries) the narrow-gage road running from Belvoir to Accotink, twelve miles, is used for purpose of supply as well as training the troops at the engineer school at that post.

The yards at Camp Eustis, abandoned for peacetime use, are filled with artillery pieces, moved around by Columbia type engines maintained by the Corps of Engineers.

There are two roads at Fort Benning,



From U. S. Army Signal Corps Pictorial Service

One of America's Big Guns, Mounted on a Heavy Railroad Car, Practicing at Fort H. G. Wright, Long Island, N. Y.

one being standard gage and connecting the post with the main line at Columbus, Georgia. Here the Government uses its own engines in switching and hauling supplies in and out of the post. The other road is narrow gage. It averages thirty miles in length, but is constantly changing and track being taken up and relaid. The road is primarily used for opening up logging areas on the huge reservation on the Chatahoochee and for moving troops and students of the Infantry School into new maneuver areas. Its career has been one of continual abandonments.

Another road, privately owned, is used for freight-hauling only. It connects the post of Fort Bragg, N. C., with the Atlantic Coast Line at Fayetteville, twelve miles away. This brings in the big field artillery pieces and ammunition shipped directly to Bragg.

The Southern Pacific shoots a spur that crawls across the desert floor and climbs the foothills of the purple Huachucas on the Mexican border, Lewis Springs to Fort Huachuca, Arizona. This road formerly hauled carloads of forage for animals. It would be interesting to compare the revenues between the forage it once hauled and the gasoline it brings in at present, now that the army is being mechanized. This road is primarily for military purposes, even though privately owned. It enables troops to be moved rapidly out of Huachuca and shoved up or down the border when desirable.

Not military roads in the sense that the army controls them, but that they are always available for transportation of railway pieces in emergency or maneuver, are those on the West Coast lines of the S. P. The coast route touches at San Diego, Los Angeles, Seattle, and Portland. Coast defense garrisons are near all these cities.

At America's foreign garrisons more railroads are available for war and peace usage. There is the "Pineapple Special," for instance, between Schofield Barracks and Honolulu in Hawaii. At Schofield Barracks tracks were laid down and a railroad regiment with full gun crews aboard passed in review before President Roosevelt when he visited Hawaii.

The army fully controls the railroad in Manila Bay at Corregidor as well as a Quartermasters' road near the army docks in Manila. However, the Panama Railroad is not controlled by the army, although mainly owned by the U. S. Government. Coast guns are moved around on this road. It is understood that the Panamanian Government controls a share of this road and the de Lesseps family of France another share. No attempts have been successful in obtaining this latter mentioned share.

Almost all large garrisons of troops in the interior of the country are situated near important railroad centers, making them quickly available where needed. There are, for instance, Fort Know near Cincinnatti, Fort Sheridan at Chicago, and Fort Warren at Cheyenne.

A complete manual of military railroads, prepared by Major General Connor, now superintendent of the Military Academy at West Point, goes into detail to explain everything from a switch and rail weights to the technicalities of timecards and 19 and 31 orders.

Bees on the High Iron

THE news that thousands of songbirds in Europe were taken across the Alps last winter by airplane into sunny Italy to save their lives is matched by a shipment of bees by rail in the United States. Seventy million bees were packed into box cars at the rate of 500 boxes in a car and about 45,000 bees in each box, last fall, and were hauled from Hallock, Minn., to Wiggins, Miss., to escape the sub-zero weather during their idle season. When spring came they were brought up North again.

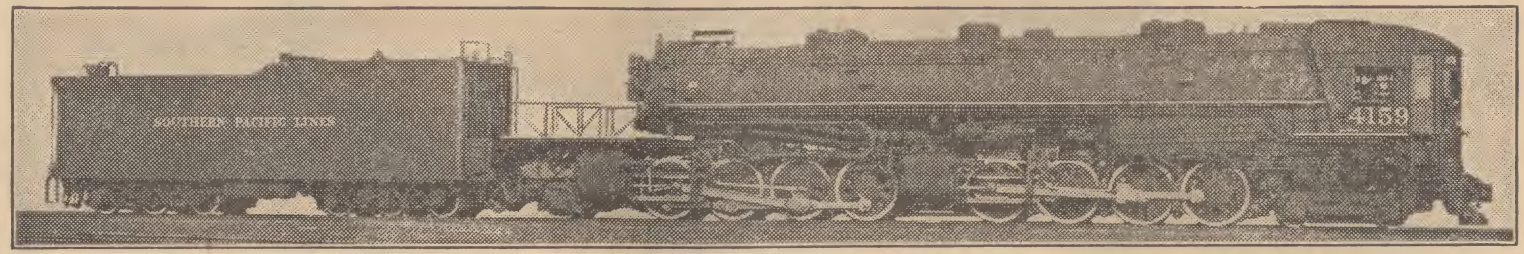
The bee cars were placed next to the locomotive so the insects would not suffer from smoke and gases of the smokestack, and were moved over a special route to avoid tunnels, for the same reason. Bees, you know, are delicate creatures. Each hive produces between 100 and 150 pounds of honey a year. "Last year," the shipper said, "I sold 750,000 pounds of honey from 3200 hives." And would he subject those bees to travel by truck, to be killed by exhaust fumes and traffic jams? Not at all! Those bees are worth real money, so they traveled by rail.

Not long ago thousands of bees swarmed upon a freight yard at Hoquiam, Wash., routing a section gang and switching crews. For half an hour work in that yard was at a standstill. Then the switching crews drove them away with jets of live steam from a locomotive. The bees, being dainty little fellows, didn't like that a bit.

A similar invasion occurred on the Norfolk & Western at Bluefield, W. Va. It was an unusual problem for Operator H. C. Calloway, the second trick man at HQ, the interlocking tower and telegraph office. A swarm of honey producers, separated from their queen, had wandered aimlessly about until they spied a hole in HQ tower that was once an opening for a cable. Maybe they thought the queen had vanished into that hole. Maybe they didn't. At any rate, the lost battalion swirled into the hole, hell bent for election, and gathered around Calloway, buzzing angrily.

Ignorant of bee technique, Calloway shouted for help. In came "Uncle Bill" Anderson, a colored section laborer, but he couldn't savvy bee language, either. After desperate thinking, the op remembered that Edgar Steele, a clerk at the Bluefield freight station, had been raised on a farm and was familiar with habits of the winged invaders. So he phoned for Steele. The clerk dashed in and expelled the bees with his bare hands. There's nothing like knowing how to do a thing.

Two of the Big Engines Built by Baldwin Recently



This Is One of an Order of 12 Locomotives (Nos. 4151-4162, Class AC-7) Completed for the Southern Pacific's Fast Freight and Heavy Passenger Service. Similar to Nos. 4100-4150 (Classes AC-4, 5 & 6), Built between 1928 and 1930, the New Engines Have Four 24 x 32-Inch Cylinders, 63½-Inch Drivers, 250 Lbs. Pressure, Weigh 639,800 Lbs. without and 1,028,700 Lbs. with Tender, Exert 123,400 Lbs. Tractive Force. They Run Cab Foremost, in Order to Give the Enginemen a Clear View of the Right-of-Way Through the Mountains. This is Possible Because They Burn Oil, Which Can Be Piped from the Tender to the Firebox. On a Coal-Burning Engine, of Course, the Tender Must Be Coupled Behind the Firebox. The Engines Cost $160,166 Apiece

Engines Like This One. With 22 x 30-Inch Cylinders, 80-Inch Drivers, 285 Lbs. Pressure, Weight of 365,300 Lbs. without and 697,300 Lbs. with Tender, To Haul Its Fast Passenger Trains between New Haven, Conn. and Boston the New Haven Paid $120,000 Apiece for Ten Streamlined Hudson Type and 44,000 Lbs. Tractive Force, It Can Haul a 15-Car Train at a Cruising Speed of 80 Miles an Hour. The Locomotives Are Class 1-5, and Are Numbered 1400-1409

By the Light of the Lantern

Ask us what you want to know

RAILROAD questions are answered here without charge, but these rules must be observed:

(1) Not more than two questions at a time. No queries about employment.

(2) Always enclose a self-addressed, stamped envelope, to facilitate our getting in touch with you if necessary. We will print only your initials.

(3) Don't be disappointed if answers do not appear at once. They are printed two months before date of issue.

WHAT is the new "mystery" engine which the General Electric Co. is building for the Union Pacific?—L. K., Grove City, Pa.

The new locomotive will be a steam-electric affair, that is, it will consist of a high-pressure condensing steam turbine driving generators which supply current for the electric motors geared to (or mounted on) the driving axle. Thus it is similar to a Diesel-electric except that instead of a Diesel engine it will use a steam turbine engine. Made up of two 2500-horsepower units (each with 4-6-6-4 wheel arrangement), it will weigh around 485,000 lbs. and will exert a starting tractive force of 76,500 lbs. After its completion (about next December), it will be used experimentally in fast passenger service, and will be capable of hauling the heaviest passenger trains at 80 to 100-mile cruising speeds. Incidentally, the General Electric Co. is building the frame, generating and driving equipment; the steam unit is being built by Babcock & Wilcox of Barberton, O., and the engine is being assembled at Schenectady.

The reason for such a design is fairly clear. While it can't help being considerably more expensive than a simple steam locomotive, its exhaust steam condenser will give it the Diesel-electric's ability to travel long distances (more than 500 miles) without stopping for water, taking it on the fly, or carrying great quantities of it along. Moreover, it will afford a chance to test the newly-developed "steamotive" unit (page 58) in railroad operation. This lightweight, compact, high-pressure steam generating machine uses comparatively little water, and, since the flames and gases from the oil fire are forced through it at high velocity, it makes steam very quickly, requiring less than ten minutes after lighting the burner to attain its full output. Although this characteristic is of greater importance in a direct-drive steam locomotive than in the turbine-electric, the steamotive unit weighs less than an ordinary boiler with the same output, and hence presents an advantage in this case, too.

The biggest disadvantages of the new locomotive will be its high purchase price and maintenance cost, the former of which may equal and the latter come close to that of the Diesel-electric. The question to be decided, then, is not only whether it is practicable or not, but whether its points of superiority—if any—are worth the increased cost.

✠

HOW many miles of railroad were abandoned between 1923 and 1930 and between 1930 and 1937? How many were built in the same periods?—R. W., Elmhurst, Dela.

Here are the figures (for the United States):

Miles	1923-1929 incl.	1930-1936 incl.
Abandoned	3,538	10,164
Built	5,125	1,662

✠

WHAT is the world's fastest scheduled passenger run?—C. A. R., E. Syracuse, N. Y.

As we explained in our long article on speeds in last October's issue, the only fair way to rate train speeds seems to be to pick out start-to-stop (or start-to-start) portions of "through" runs and compare them with runs of similar length. On that basis, the world's fastest run is that of the eastbound *Super Chief* of the Santa Fe system, which was covering the 202.4 miles between La Junta, Colo., and Dodge City, Kan., in 145 minutes, or at an average of 83.8 miles an hour. According to the official cards when we went to press, it is still doing so.

WHAT is the world's largest steam locomotive?

(2) I've heard that the switch locks on the left and right side of the tracks on some lines cannot be unlocked with the same key. What's the idea?—E. L. K., Wheelerville, Pa.

(1) Using just about any standard you care to—length, weight, or power—the 5000 series of Northern Pacific 2-8-8-4 types were and still are the world's largest steam locomotives, for they use a bigger boiler, bigger firebox, and develop more horsepower than any steam locomotive built before or since. With four 26 x 32-inch cylinders, 250 lbs. pressure, 63-inch drivers, and 139,900 lbs. tractive force (152,300 lbs. with booster), they weigh 715,000 lbs. without their tenders, which weigh 401,000 lbs. in working order.

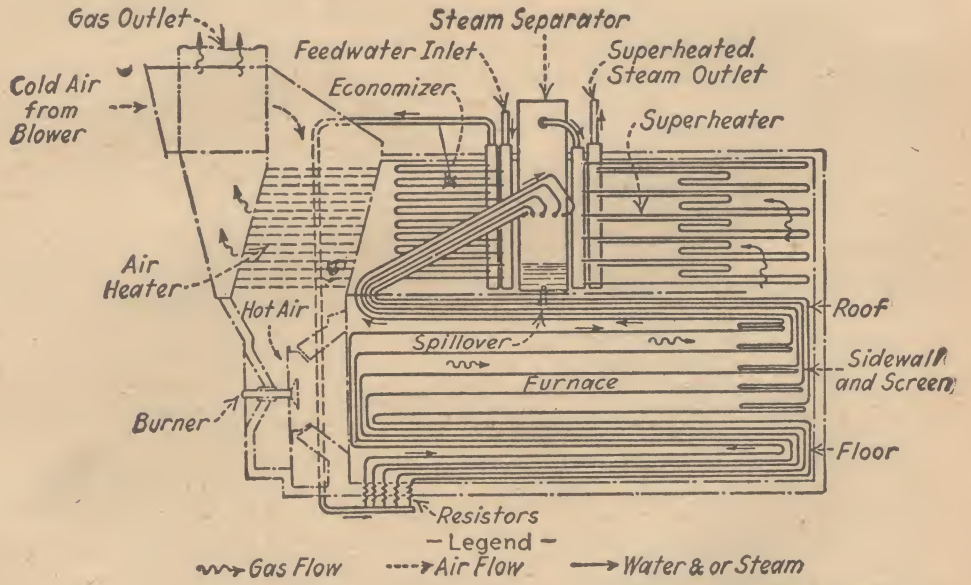
(2) That's a new one on us. If it is true, those roads would have to be consistent about the way in which they placed their switch stands; that is, they always would have to put a stand controlling a turnout to the left on the left side and vice versa. In which case, you see, the two keys, under certain conditions, might keep trainmen from throwing the wrong switch. But it sounds crazy to us—our reason, we mean—and if we had time to write letters to 150 railroads about the matter, we'd do so.

WHEN two engines are coupled together at the head end of a train, how does the second engineer know when to open or close his throttle or work his brakes? What happens when the helper engine is in the middle of the train?—D. T., Los Angeles.

First of all, the head engineer handles all the brakes on the train. Those on the second or third engine, no matter where it is working, are cut into the train line in such a fashion that they respond exactly as do those on a box car. As for knowing when to open or close his throttle, the second engineer, if he isn't deaf, dumb or blind, has no trouble on that score. He knows where they're going, what they're hauling, and how much it takes to get there. When the head engineer works his machine hard, he follows suit, if necessary. And, obviously, when the head engineer sets the brakes, there's no sense in trying to run faster.

✠

SOME time ago I read that some Brazilian engines were using coffee as fuel, since there was an overproduction of the bean. On what kind of engines was this coffee used, and were any changes made to enable them to burn it?—K. W. C., San Pedro, Calif.



Courtesy Railway Age

Diagram (Not a Cross-Section) of the New Steamotive Unit, Two of Which Will Power the Union Pacific's Turbine-Electric Locomotive (Discussion on Page 57). The Water Enters Through The Feedwater Inlet, Is Preheated in the Economizer (by Exhaust Gases), Passes to the Bottom of the Unit, Is Converted to Steam in the Five Circuits Forming the Floor, Sides, and Roof of the Furnace (There Are No Tubes), Enters the Steam Separator Where It Loses Its Water, and Finally Passes Through the Superheater, after Which It Is Ready for the Turbines, Having Attained a Temperature of 1000 Degrees and a Pressure of 1500 Lbs. per Square Inch. It Requires Only Ten Minutes to Do So from a Cold Start

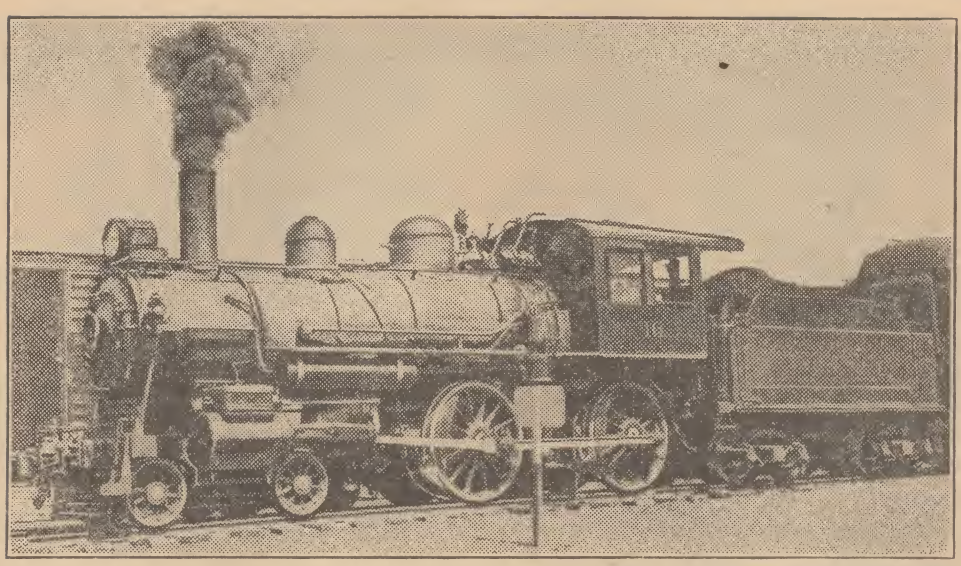


Photo by Linwood Moody, Union, Me.

Constructed by the Manchester Locomotive Works in 1893 as No. 10 of the Bangor & Aroostook, This Trim Eight-Wheeler Was Later Renumbered 211, and Was Finally Sold to the Belfast & Moosehead Lake R. R. One of the Line's Three Engines, She Has 18 x 24-inch Cylinders, 63-Inch Drivers, 160 Lbs. Pressure, Weighs 104,000 Lbs., Exerts 16,800 Lbs. T. F.

We'll confess we haven't asked the Brazilians about this matter. But we do know they preferred to burn coffee in engines rather than sell it abroad at disastrous prices, and we also know they used it on the standard, run-of-the-mill engines, most of them of British manufacture. Whether or not they made any changes would depend upon the latent heat in the coffee beans, the way in which they burn, and the service in which the engines were used. Judging from our meager knowledge of the composition of coffee beans (about 50 per cent cellulose and fat), we'd say that they not only made splendid fuel for any engine without change, but gave the old engines (shall we call them coffee pots?) a new lease on life.

✠

WHY don't most switch engines have pilot trucks?

(2) Which of America's fast streamlined trains is the fastest?—A. H., St. Louis Park, Minn.

(1) Switchers are constructed so that their maximum tractive force calls for the maximum possible weight on their driving wheels, and the easiest way to insure this is to design them with no leading truck and if possible no trailing truck. Switchers with leading trucks are generally converted road engines. Since the main function of a leading truck is to guide the engine at speed, a switching locomotive needs none.

(2) Practically all the Diesel-electric streamliners boast a maximum speed of 115 or 120 miles an hour, and hence they are all capable of the same speeds under the same conditions. The steam streamliners (particularly the *Hiawatha*), however, are not governed by their engines' inability to go faster, and if the track and load were right, they might surpass 130 miles an hour. In actual service, the fastest *run* is made by the Santa Fe's *Super Chief* (see answer to C. A. R.), which, though it isn't streamlined as this is written, will be shortly.

✠

IS IT true that a German electric car achieved a speed of 130 miles an hour back in 1903?—W. T., Powell River, Canada.

It did, but on a special 14-mile military track between Marienfelde, near Berlin, and Zossen. Two specially-built cars were used in the trial runs. Each weighed about 100 tons, since great weight was thought necessary "to hold the rails"; and each used four 250-horsepower motors mounted on two six-wheel trucks. Looking something like street cars, they did not use trolleys, but got their 15,000 volts through six arms swinging on two upright masts attached to each car top. Incidentally, the trial tracks were equipped with guard rails to help prevent derailment and strengthen the road.

On September 20, 1903, one of the cars attained 112 miles an hour, and on October 6th it did 126 miles an hour. Finally, on October 23d, the General Electric car (the other was

a Siemens-Halske job) achieved 130.5 miles an hour, and the second car followed a few minutes later with a top speed of 128.5 miles.

Significantly enough, the only rail car ever to surpass that speed was not a machine built heavy "to hold the rails," but an extremely light rail-Zeppelin built by a German named Franz Krukenberg. In 1931 it achieved a 144-mile-an-hour pace on a trial run between Hagenow and Hamburg. Perhaps some of you will recall the photographs of the car which appeared in the papers at the time.

✠

WHEN engines are built for Western roads, are they assembled and run under steam to their destinations, or are they towed in trains?—M. L. H., Chicago.

They are completely assembled insofar as it is possible to do so (sometimes they are so big that they won't come within the intermediary line's clearance limits, and the cab or bell or stack, etc., has to be disconnected), and they are shipped in a regular train, usually one by one. In 1922 a shipment of Southern Pacific 2-10-2's was delayed at Baldwin's until the whole batch was completed, and then 20 locomotives were towed out to the West Coast as the "Prosperity Special," bringing lots of publicity to the railroad and to the engines (see photo on page 61).

✠

W. D. S.—The Burlington's *Denver Zephyr* covered only 1017 miles on its world record run between Chicago and Denver because it used the cutoff between Pacific Junction, Ia., and Ashland, Neb., thus saving 17 miles over the westbound mileage of 1034 via Omaha. The regular eastbound mileage, however, is 1039—due, we believe, to the way in which the train is handled through the Omaha terminal.

✠

H. K., Switzerland—A "lap" siding is a longer-than-ordinary siding on which a train can meet and pass another train without coming to a complete halt. The main reason why this is possible is not so much to the length of the side track as it is the use of centralized traffic control or automatic signaling, can be gaged accurately enough to permit the practice.

✠

D. A. B., Kentfield, Calif.—The railroad line between Chemult and Klamath Falls, Ore., was built by the Southern Pacific as part of its Cascade line to the Pacific Northwest.

(2) The Santa Fe's *Saint & Angel* was inaugurated between San Diego and Oakland on Dec. first, 1911, and discontinued Jan. fifth, 1918.

✠

C. H., Maywood, Ill.—There are, or have been, more different types of valve gear than we could list on this page. In America today, however, the field has narrowed down to four or five prevailing types, of which the Walschaert and Baker are being installed the most. These two are similar in general layout, but instead of a slotted link the Baker uses a bell crank and double-arm reverse yolk. If this isn't quite clear, the best way to distinguish them is to look for the reverse link, in which there is a long, slightly curved slot which carries the rod extending to the valve itself. If you see the reverse link, the chances are that the gear is a Walschaert, and if you don't, but see instead what looks like a bunch of levers, it's a Baker gear. The Young and Southern gears also use reverse links, but on the former there is no eccentric rod connected to the main driving axle, and on the latter the link is set horizontally and not vertically. The only other valve gear worth mentioning in this brief account is the time-honored Stephenson, which was America's most popular gear until the ascendency of the Walschaert. It is located under the boiler, deriving its motion from eccentrics on a driving axle, and hence the only part of it immediately visible is the valve rod. Many older engines are still equipped with it.

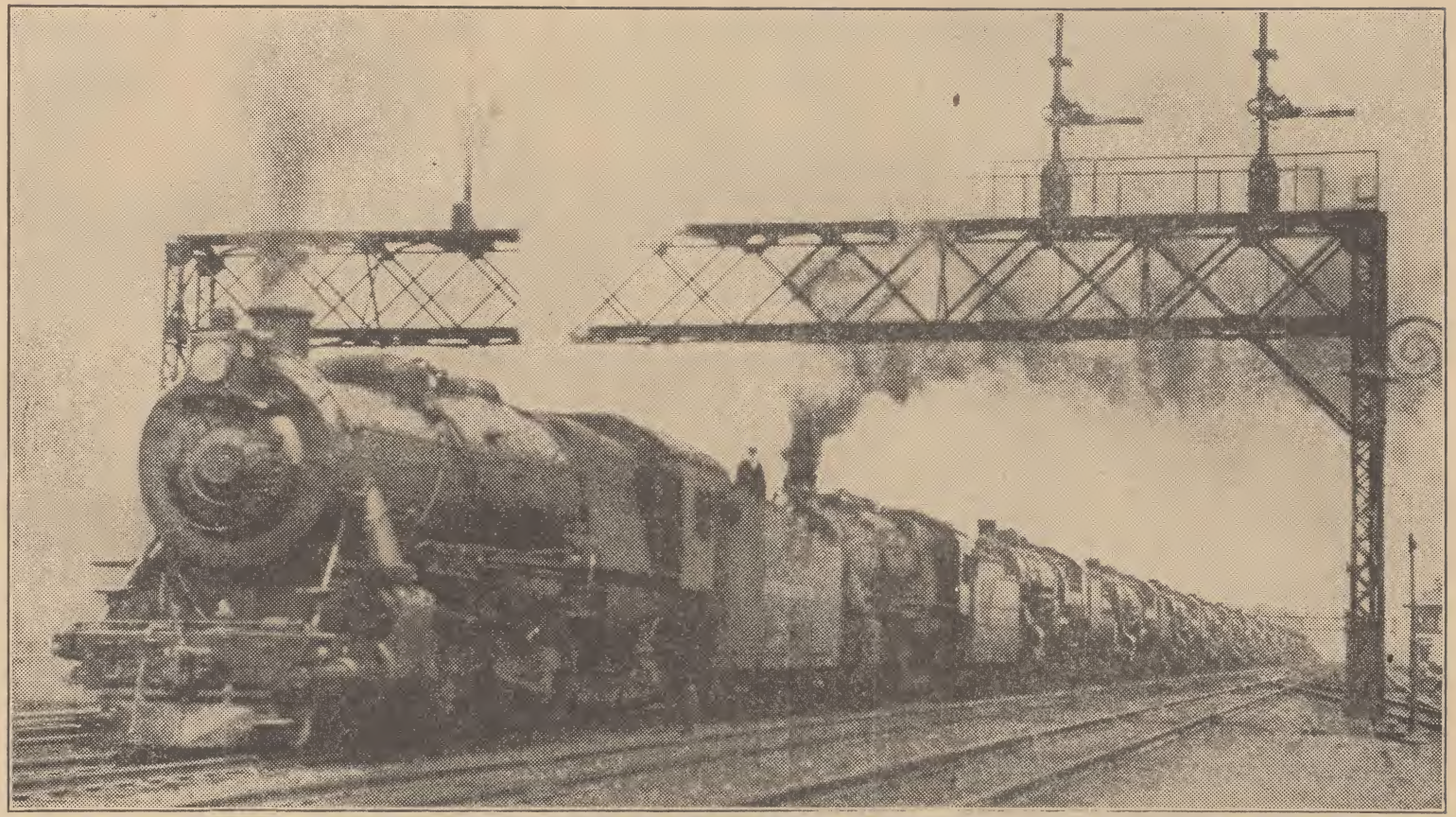
(2) The Consolidation types of the Chicago Great Western numbered in the 300 and 600 series were built by Baldwin in 1901 and 1909-1910.

✠

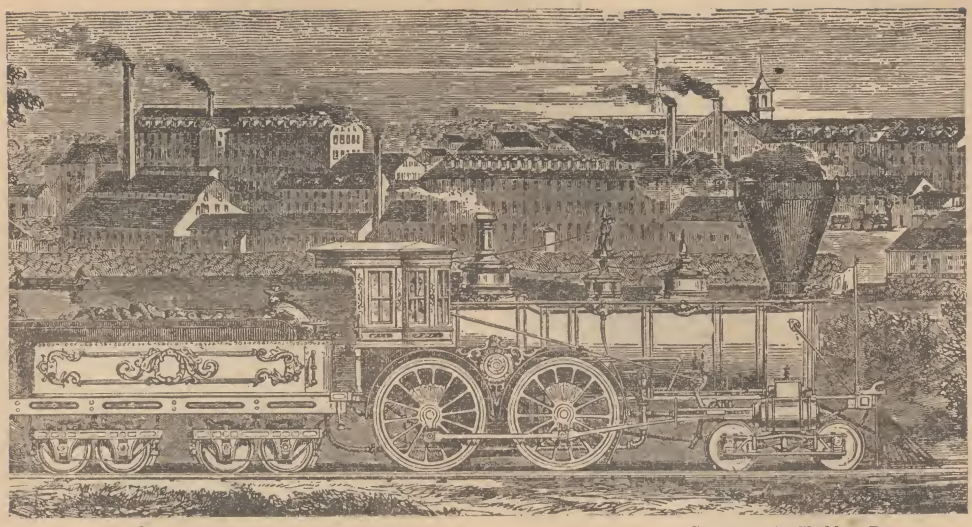
R. A. W., Manchester, Conn.—The Belfast & Moosehead Lake R. R. was chartered in 1867 and completed in 1870 between Burnham Jct. and Belfast, Me., 33 miles. Between 1871 and 1926 it was leased to the Maine Central, but now it is operated by the City of Belfast, which owns $139,600 of its $267,700 preferred stock and $360,400 of its $380,400 common stock (the rest of the common is owned by the town of Brooks, Me.). It did well in 1936, with $26,280 net income. Employing about 45 people, it owns three small type locomotives (Nos. 16-18—photo of No. 16 on page 59), two cabooses, six passenger and four freight cars.

✠

D. E. M., Salem, Ore.—The old Independence & Monmouth, which owned three miles of track between Independence and Monmouth, Ore., and leased 16 miles (Arlie to Dallas)



In the Fall of 1921 the Southern Pacific Ordered 50 Heavy 2-10-2 Type Engines from the Baldwin Works. Since the S. P. Did not Need Them Right Away They Were Held Until a Whole Batch Was Ready, and as a Huge Publicity Stunt 20 of Them Were Coupled Together and Towed to the West Coast as the "Prosperity Special." Hauled by Two Pennsy Mikados, They Left Eddystone, Pa., on May 26, 1922 (Photo Above), Traveled over the Pennsy to St. Louis, over the St. Louis Southwestern to Corsicana, Texas, and Then onto the S. P. After Many Demonstrations and Celebrations, They Reached Los Angeles, Calif., on July 4th



Courtesy A. Sheldon Pennoyer

Old View of the Amoskeag Works at Manchester, N. H., as It Looked in the Days When It Was Turning out Locomotives. According to the Best Records Available, Its Engine-Building Activities Began about 1849 and Ended Seven Years Later

from the SP, was chartered in 1889 and opened in 1890. In 1908 it had two locomotives, six cars. It has been discontinued for several years.

(2) The Willamette Valley & Coast was organized in 1911, and had one locomotive and seven cars. It is now abandoned.

✠

E. K.—According to the best advanced information available, the New York Central's 50 new Hudson type engines will be of about the same capacity as the present machines. However, it is said they will have 22½ x 29 instead of 25 x 28 cylinders, 275 lbs. pressure instead of 225 lbs., and will weigh a little more—which probably means they will be able to develop a little more power. The drivers will no doubt be 79 inches in diameter, as at present.

✠

E. L. G., Valdosta, Ga.—The old Statenville RR. of Georgia was organized in 1906, had one locomotive and one car, is now abandoned.

(2) The Valdosta, Moultrie & Western was chartered in 1909, commenced operating a year later between Valdosta and Moultrie, Ga., 42 miles. In 1916 it had two locomotives and 20 cars, is now abandoned.

✠

H. C., Waterbury, Vt.—The 700 series of Central Vermont engines (2-10-4 type) are more powerful than either the 3000 or 4000 series of B&M engines, which have about the same rating at low speeds (the 4000 series, 2-8-4, can pull more than the 3000's at higher speeds).

✠

T. L., New Lambert, New Zealand—The disc drivers on Grand Trunk Western No. 6041 are now quite common on American roads, and most new engines—especially the heavy ones—are being equipped with them. There are several makes of these wheels, and they all not only provide better counterbalance than is possible with spoke drivers, but also are considerably lighter. In many instances they have reduced the dynamic augment, or rail pound, to such a degree that heavy two-cylinder steam engine entirely equipped with them pounds the track no more than a Diesel-electric or electric of the same weight.

✠

I AM enclosing a clipping which tells how a West Jersey & Seashore engineer, on a special run between Camden and Atlantic City in 1897, ran his train 60 miles in less than 28 minutes. Is this a misprint?—R. H. N. J.

It might be, and it might not be. They used to turn some fast running on that stretch of track, especially during the Gay Nineties, and we shouldn't be the least surprised if this story was true. You see, the railroads at that time

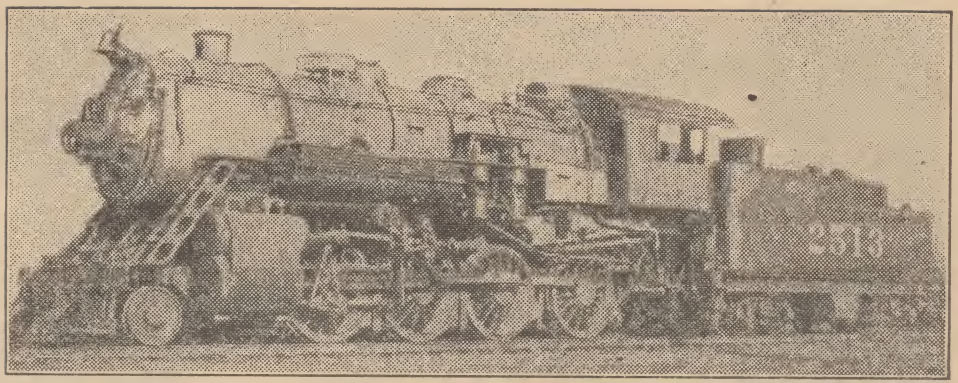


Photo by S. R. Wood, Stillwater, Okla.

Built in 1910 as No. 57 of the Old Kansas City, Mexico & Orient, This Heavy Consolidation Is Now Santa Fe No. 2513. See Page 115 for Specifications

preferred to hush up the reports of extraordinary speeds for obvious reasons, and many of the sensational spurts made on the tracks between Camden and Atlantic City are today either memories in the minds of the old-timers or buried in moldy piles of dispatchers' sheets. If it were possible to look at the OS ("on sheet") record of this particular run, it might well verify the speed.

✠

Q A. S., Congerville, Ill.—We've never heard of a road called the Yankton, Norfolk & Southern, running southward out of Yankton, S. D. Has anybody else?

(2) The St. Louis & Hannibal operates 51 miles of track, owns three locomotives, 166 freight and four passenger cars. It provides motor coach passenger service.

✠

Additions and Comments

There are a couple of items on hand this month, but before we take them up, we want to remind you of the "fastest, finest and farthest" fan excursion ever operated. It'll be run on Sunday, May 16th. The main section—or sections—will run from New York and Philadelphia to the Pennsy's great shops at Altoona, Pa.—one of the largest in the world. But there will also be service from Washington, Baltimore, and even from Chicago, as well as all principal intermediate points. Special low rates—less than a cent a mile—will be in effect, and the Pennsy, from President Clement down, is leaving nothing undone to make the whole affair the greatest fan trip of all time. You'll find the more or less complete dope on page 47, but if it doesn't answer your question, write to the passenger department of the Pennsylvania R. R. in Chicago, to the division passenger agent in Philadelphia, Baltimore, or New York, or to the general passenger agent in Washington. If it's more convenient, drop in any P. R. R. ticket office.

✠

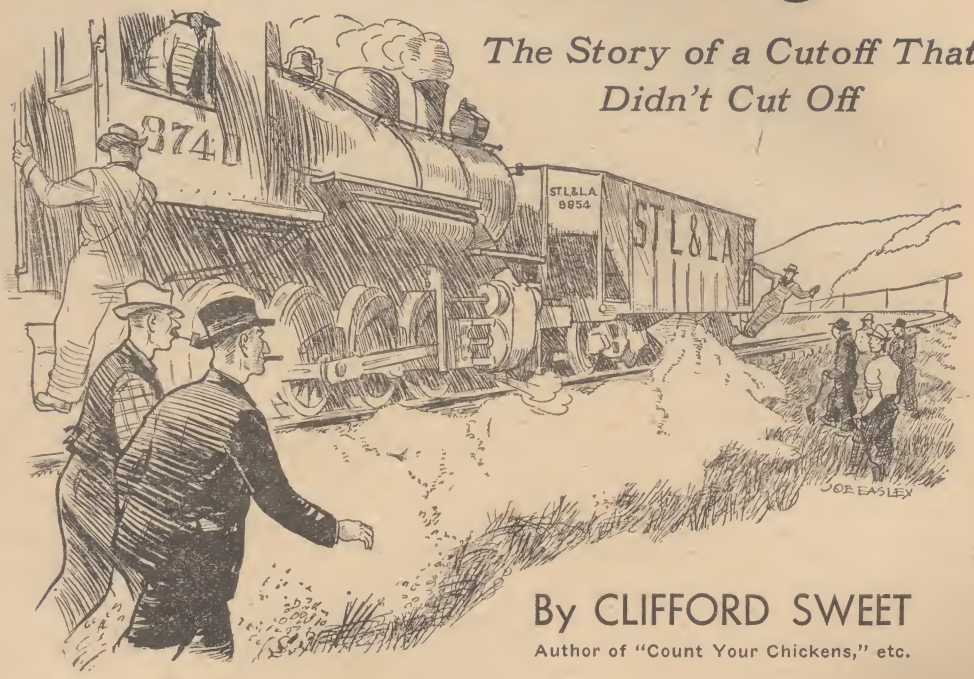
First up in the complaints this month is one concerning the Virginian roster. You'll remember we showed a photo of No. 900 and said that it was now numbered in the 700 series. As a matter af fact, points out H. E. N. of Bluefield, W. Va., Nos. 900-904 were assigned to the Virginian in 1919 by the United States Railroad Administration, but after being lettered they were re-assigned to the Norfolk & Western as Nos. 2000-2004 without ever having turned a wheel on the Virginian (we've heard that the Virginian turned them down for some reason or other). However, they were identical with the Virginian 700 series, and for all practical purposes the photo was not misleading.

✠

In the April issue, in answer to the query about what the flagmen would do when their trains (running in the same direction) were stopped on parallel tracks, we figured that each flagman would know the sound of his whistle, or that if the whistles were almost alike, they might as well toss a coin. It seems that the incident practically happened about 22 years ago, at French Creek Tower, west of Meadville, Pa. According to W. David Swaney of Wellsburg, W. Va., passenger trains of the Bessemer & Lake Erie and the Erie were held up on account of frozen switches. The Bessemer train was the first one to be cleared, and the engineer called in the flagman, whereupon both flagmen came marching back to the train. Of course, the Erie man had to go back and flag until he was called in by his own engineer.

Over The Sawlog

The Story of a Cutoff That Didn't Cut Off



By CLIFFORD SWEET

Author of "Count Your Chickens," etc.

THE period preceding the close of the fiscal year, which ends on June 30th, was always a trying time for minor officials on the River Division of the St. L. & L. A.

It was about this time each year that a frantic attempt was made to balance the division budget; old contracts expired and new ones were hastily drawn; expenses were pared to the bone in a last-minute effort to offset earlier reckless spending, and Superintendent Melcher went around with a dead cigar clamped in his mouth and a frown on his florid face.

On the morning that the financial report for the Sawlog Cutoff came out, Stonewall "Stony" Bell received a peremptory summons to appear at division headquarters.

Stony's original title was trainmaster. His territory was the Sawlog Cutoff, which was part of the River Division. In the process of hewing down expenses, the duties of roadmaster had first been added to the trainmaster's job. Then, little by little, other official capacities had been abolished and their duties shifted to Stony's patient shoulders; until now it was safe for main-line officials to cuss him for almost anything that happened on the cutoff.

This latter, extending from Belle Isle to Sawlog Junction, was built primarily as a cutoff, though the idea never seemed to jell. While it shortened the distance over the division—Belle Isle to Springfield—exactly 39.2 miles, there had never been a main-line train put over it. Immediately after the line's completion, petty jealousies had arisen among the officials, and one hundred

and seven miles of easy grades and long tangents had been relegated to ignominy.

Railroading on the cutoff had changed but little in the twenty years of its existence. It still drew the cast-off motive power and other equipment from the main stem, and it produced about as much revenue as a second-rate branch line.

Speaking to Stony about revenue in connection with the cutoff was like waving a red flag at a bull. It made him see red.

"Why should a cutoff produce revenue?" he would retort. "That isn't its purpose at all. If our officials ever roused out of their stupor long enough to realize that the Sawlog was a cutoff and not a glorified branch line, the Sawlog might become the main line."

Thus Stony preached the economic possibilities of the shorter route to everyone who would listen. Thirty-nine and two tenths less car-miles across the division. Thirty-nine and two tenths less miles of expensive roadbed to be pounded to pieces by heavy trains.

And this brings us down to Stony Bell's chief pride and constant worry, the roadbed. Year in year out, he nursed that roadbed and kept it in tip-top condition. To do this, in the face of tight-fisted economy, required a bit of scheming.

Had he been so minded, Stony could have cleared up the mystery concerning the cars of cinders and crushed stone intended for main-line use which were forever disappearing from sidings at junction points with the cutoff. And Stony had thousands of cross-ties—on paper—which, instead of reposing in neat, dirt-covered piles along the right-of-way, per inventory, had already been tamped into the track. This fact alone, had it been known to Superintendent Melcher, would have provided grounds for a devastating upheaval.

STONY found his chief that morning crouched behind his desk, driven to cover by harassing problems and hurling verbal broadsides at a frightened steno perched nervously on the edge of a chair.

Stony dropped into a handy chair to wait. He could not help overhearing the contents of the letter the brass hat was dictating and, since it was the curt dismissal of an employe, Stony guessed that Mr. Melcher was in one of his moods.

After "Wild Ad" Carnigan, an engineer with a penchant for fast running, had been cast out of service for failure to observe existing speed restrictions, Melcher dismissed the lady steno with an imperious wave of the hand. Then he turned on Stony Bell.

"I've been going over your financial report for the cutoff," he said in a brusque manner.

Stony brightened. "Looks pretty good, don't you think?" he asked cheerfully. He had spent a lot of time getting that information together.

"Good for what?" Melcher growled.

"Why," said Stony, "our empty car-miles have decreased two points this year, while our average load per car went up nearly a ton."

The super removed the cigar from his drooping mouth and stared at its glowing end. "And while you was doing that," he said, "you was losing two dollars per mile every month you operated. Is that what you call *pretty good?*"

"Well," Stony argued in dampened spirits, "that's a lot better than the same period a year ago. Besides, we don't expect much of a showing for winter and spring. Our rush comes—"

Mr. Melcher raised a heavy palm as a command for silence. "Never mind what we expect and what we don't expect! We didn't expect the I.C.C. to turn down our application to junk the Sawlog, either, but they did. Now we got to go on trying to make that worthless piece of track pay for its upkeep."

Stony Bell was out of his chair at a bound, a warm spot of color surging through his tanned cheeks.

"Junk the Sawlog?" he croaked. "Why—you can't do that!" This was the first knowledge he had ever had that such a thing had been thought of.

"Who says I can't?" Melcher glared at his trainmaster. "Here's what I called you up here for," he continued. "I want you to make a drastic reduction of expenses on that lousy line. And when I say *drastic,* I mean cut it down plenty."

Stony's eyes widened in outraged surprise. Cut down expenses! They had already cut everything to the danger point now. It simply couldn't be done.

Melcher saw the other gathering force to drive a protesting wedge and forestalled any such verbal outburst.

"Now don't try to tell me it can't be done," he warned, "because I absolutely know it *can* be done. Pull off some more section men; close up two or three telegraph offices, or cut off another pumper or so. Why, dammit, man! There's a dozen places where you can cut down expenses if you get your eyes open."

The brass hat met Stony's growing defiance with a look of cold menace, and added:

"If you leave it for me to do for you, I know where I can chop off two hundred and seventy-five dollars a month in one chunk."

A sizzling retort surged up inside Stony Bell but perished miserably on his lips. The specific sum mentioned by Melcher was the exact amount of his monthly paycheck.

The interview ended as similar ones in the past had ended—Stony, mildly defiant and a little heroic, promising to go back and finish wrecking the Sawlog Cutoff.

VAN PELT, a short, thick-set man around thirty, with a weary look in his harsh gray eyes, dropped into a chair at the corner table where Stony Bell sat munching a sandwich and figuring on a paper napkin.

"What's the matter with this cockeyed railroad anyway?" demanded Van Pelt, who was the division's mainline trainmaster.

Stony Bell cast away his figures and pocketed his pencil. The figures were a dismal failure from any angle. "Been talking with Melcher, I see."

Van Pelt grinned wrily. "How did you guess it? The Old Man just handed me a miracle—told me to make it work."

The waitress, slim, clear-eyed and efficient, intruded with a glass of water and a pat of butter. Van Pelt ordered steak and eggs, then contrarily called the girl back.

"Bust it!" he said. "Bring me a cup of black coffee and let us alone."

"Miracles," Stony observed, "are just everyday problems in a trainmaster's life. And making one dollar do the work of two isn't a miracle any more."

"No, but running a race with a pack of jackasses is," Van Pelt came back vehemently. "That's what I'm slated to do. And I'll lose everything—including my own job—doing it."

"Eh, what?" Stony looked up astonished.

"Our mail contract," he explained, "expires the last of this month. Instead of renewing it the Government calls for a mail test. Whoever hauls the mail from here to Springfield tonight the quickest, gets the contract for next year."

"What are you trying to give me?" Stony jeered. "Race for a mail contract when there isn't any other railroad to race with—not since the Missouri & Northwestern quit running in here."

"You've been sticking around out in the woods too close," replied Van Pelt, pointing out the window. "See them babies over there? If you think the Missouri Transport Company can't give us a race with that fleet of fast mail trucks, you're out of your head."

Stony glanced out across the hot, dusty street. A row of trucks, glistening blue and white under the noonday sun, were backed up to the station platform. He had heard a lot about trucks and the raids they were making into company revenue, but he had never yet come into actual contact with any of them. The reason, he guessed, was because the Sawlog, built to cover the shortest distance between two points, had missed every town large enough to invite such competition.

"The devil of it is, we haven't got a Chinaman's chance to win!" Van Pelt wailed. "The new State Highway is straight as a crow can fly from here to Springfield. The trucks have better than a fifty-mile edge on us for distance right from the start. They'll beat us, hands down."

"Are you going to throw up the sponge before you even start?" Stony flung out impatiently.

He wished this was *his* race. He'd give those babies a run they'd remember for a long time. There was something about the situation that made his blood tingle. All the old longing for main-line action, years suppressed, fired up in him all over again.

"Oh, I'll do my best, of course," Van Pelt hedged. "I've got to, to hold my job."

Yes, the mail contract was important. Without the huge volume of U. S. mail that now moved over the River Division, there would be little justification for the two high-rolling night trains that gave the St. L. & L. A. a chance to bid for transcontinental traffic.

BUT what Stony was thinking of mostly right then was the new general manager, Travis by name. Travis had come to the St. Louis & Los Angeles from an Eastern road a month or so back. He had one outstanding quality, so gossip said; he had that rare ability to scent out economic assets and put them to earning dividends.

On the strength of this one thing, Stony Bell had, with some trepidation, gone over Melcher's head and written the new brass hat a letter. His appeal, of course, was an impassioned plea to reroute main-line traffic over the Sawlog Cutoff. He pointed out the economy of the shorter route, the saving in expensive car-miles. But nothing came of it. The G. M.'s answer was silence in large, unbroken doses.

"Who's going to pull that test run tonight?" Stony asked curiously.

Van Pelt screwed up his forehead in pensive thought. "Guess it'll be Wes Garver. He's got the best all-round record on the division. Wes is cool and steady and he never goes off half-cocked by taking chances."

"Hmmmph!" Stony snorted. "Better pick somebody with guts and a bum record. If it was me, I'd pick some

hard-luck Johnny that won't be thinking of his record every time he gets hold of the throttle. You've got to *step* to win that race. Don't forget the trucks have the shorter route by fifty miles. That chops fifty minutes off their running time right there. You'd better pick right when you choose an engineer for that run."

"Who would *you* pick?" Van Pelt inquired.

"Wild Ad Carnigan," said Stony.

Van Pelt's eyes widened. "Say, be sensible! That harebrained hogger is slated for dismissal right now."

"Wild Ad," Stony replied, neglecting to mention that the letter discharging the engineer had already been written, "is misunderstood. Treat him right instead of knocking him all the time and he will settle down."

Anybody down and out was sure of Stony Bell's whole-hearted sympathy.

Van Pelt thought the suggestion over for a moment. "You might be right, at that," he admitted "Wild Ad has clipped every record made on this pike. If we turn him loose on that outlaw train tonight and tell him to go to it, he might win."

"I'm glad you're waking up," said Stony.

FROM the eating-house Stony went straight to the division office. Melcher had on his hat and coat and was starting to leave his office, but paused to stare impatiently at Stony.

"Well, what is it you want now?" he asked. "I'm going to Springfield on Nine—"

Stony realized the disadvantage of arguing under such conditions, so he strove to make every word count. He stated his proposition squarely and then started hitting straight out from the shoulder.

"No! No!" Melcher growled, and commenced edging toward the door. "Reinstating a man with a record like that is positively against my policy."

"Hang your policy!" Stony threw discretion to the wind. "Wild Ad Carnigan is the logical man to pull that mail test. Oh, I know he ran his train like a reckless fool even after you warned him. But that's the kind of a man we need to win a race."

Mr. Melcher searched Stony's face shrewdly. "What's this race to you?" he asked. "Why aren't you out figuring ways to cut down expenses on the Sawlog?"

"Yeah, I know." Stony refused to allow his ardor to be dampened. "I've got a plan that'll take care of the financial affairs on the cutoff for a long time. I just don't like the idea of losing what that race stands for, when we got what it takes to win it."

Stony painted a gloomy but realistic picture of what the River Division would be without Numbers Nine and Seven, the two trains now hauling mail. He referred to big modern trucks zooming down the highway at passenger-train speed, emboldened by success, grabbing at other lucrative business once the mail contract was safely in their clutch.

Melcher was impressed. He showed it by his narrowing eyes. "Ummm!" he muttered. "This might be a good way to get some of the fast running out of Wild Ad's ornery hide."

"No doubt of it." Stony urged. "Turn him loose! Let him have his fling at speeding. Once he gets that fast stuff out of him, he'll be the best hogger you got."

Stony kept a weather eye open. The instant Melcher's countenance began to waver, showing that the idea was taking hold, Stony paused dramatically.

The careful build-up, however, was wasted. At the very instant the super was making up his mind to give Wild Ad another chance, a clerk tiptoed in with a wire report heralding a nasty derailment on a dangerous curve.

Mr. Melcher read the report through in white-lipped silence. Then he stormed:

"There's what these reckless fools do for you! I wouldn't even let Wild Ad Carnigan come back on the right-of-way!"

He closed the interview by stalking out.

Stony sighed wearily. His moment was gone. In his present mood, Melcher would listen to nothing smacking of leniency, so a further plea for Wild Ad would be useless.

In the outer office where the clatter of typewriters filled the air, Stony paused by a desk. The girl who had taken Melcher's dictation glanced up from her keys with a sympathetic smile. Stony smiled pleasantly back, and the instant the girl bowed her head, he deftly removed two sealed envelopes from the outgoing mail in a wire tray on the desk.

One was addressed to Wild Ad Carnigan, the other to Trainmaster Van Pelt. Out in the hall, he shamelessly ripped the envelopes, assuring himself that he held in his hands the power to give Ad another day in service.

NEWS of the coming race with the trucks became noised about. Men in overalls and red bandanas loitered on the station platform, inspecting the trucks, discussing and comparing the speed and the stamina of this new contestant for honors.

At times the discussion waxed into heated argument. Harsh words, punctured with distinctive railroad profanity, rose and fell in the hot, sultry air. Some openly scorned the stationary row of trucks, loudly proclaiming them as good as beaten before they started. The wiser and older heads grimly refrained from voicing an opinion.

When Van Pelt and Stony Bell came out of the yard office and along where the arguments were in progress, it was expected that some official statement would be heard. Instead, the two trainmasters avoided the group and went directly to the hump of shade beside the express office where they fell into a heated argument themselves.

What was said could not be heard, of course, but Stony Bell, one foot propped on the top of an ice-cream carrier, could be seen sawing the air with one hand while he expounded something to Van Pelt. Whatever the argument, it was spiritedly contested for a time, then Van Pelt gradually weakened, and at last grudgingly accepted the conditions imposed by Stony Bell.

Meanwhile, in the Mill Street station at Springfield, Superintendent Melcher and General Manager Travis were standing behind the telegraph operator, who had a set of head phones clamped to his ears.

Travis was a portly man around fifty with a rich-looking cigar clamped bulldog-fashion in one corner of his mouth. Outwardly he was at perfect ease, exhibiting the composure of a man who has given his orders and will brook no failure. Melcher, on the other hand, was nervous and restless. He fell to pacing the floor. At intervals, he paused to flick cigar ashes at a tray on the ticket-seller's counter.

Presently the operator leaned forward as if listening. Then he held the ear phones away from his head and turned around.

"Our test train left Belle Isle at seven ten," he said. "The truck fleet got away five minutes before."

"Ah!" Some of the tension left Melcher's face. "Right on the dot. Coalville is ten miles out. They will pass there at seven twenty-one."

But they didn't. At 7.25 Melcher could stand the uncertainty no longer and ordered the operator out of the chair. He squeezed his own bulk into the creaking seat and fumbled the head set awkwardly in getting it saddled over his shiny pate.

"Dispatcher!" he barked. "Is that mail test showing at Coalville yet?"

Neither the operator nor Mr. Travis could hear the dispatcher's reply, but they both saw the loose folds of skin around Mr. Melcher's neck suddenly become blotched with purple, at the same time swelling out over the edge of his chair.

"What's that?" he yelled. "Hello—hello! Say that again."

There was a short pause and Melcher groaned. "Over the cutoff? The Sawlog Cutoff? . . . Impossible . . . Get 'em back! . . Yes, that's what I said. Get 'em back! That lousy track isn't safe for a hand car . . . What? Oh, you can't, huh? . . . Well, who in thunder told you to move that train over the cutoff, anyhow? . . . Van Pelt, eh? Ummm! What engineer is pulling that train? What? Don't be a sap! . . . I fired Carnigan this morning. . . . Oh, you saw him on the engine yourself? Who else is riding that engine? . . . You think Stony Bell is . . . I know damn good and well he's the instigator of this mess . . . Did he say what time he expected to reach the main line at Sawlog Junction, if he ever does? . . . Hell's bells . . . One hundred and seven miles in ninety-five minutes! The damn fool's crazy!"

CRAZY it was, for Wild Ad Carnigan, latching the throttle back over the coal gate, was sending one of the big Ten Hundreds over the Sawlog Cutoff for the first time in history.

Stony Bell felt the throb of powerful machinery beneath his feet and looked with dumb admiration at the lean, whip-like figure grinning into the night from the right-hand cab window. Wild Ad Carnigan, he guessed, was the only man on the division who would take his word for good roadbed and would send that quivering mass of fire and steel boring into the night with never a thought of fear.

Wild Ad winked at Stony and gave his engine another notch. He leaned over to wipe the face of the speed clock with a piece of dirty waste.

Seventy. Stony heard the voice of the Ten Hundred change in tone. The sound from her stack was like the far-flung drone of a mighty motor as it ripped the night into shreds, swelling above the crash of drivers over rail joints and switch frogs.

They roared through a rocky cut, the reverberations smashing back at their ear drums. They shot across a narrow flat, out onto Cat Creek Bridge, the taut understructure vibrating like the strings of a zither. A light blinked dizzily ahead. There was a deafening crash of drivers hammering a switch frog, a swish, and a lonely station lay a mile behind.

Stony glanced across the swaying cab at Van Pelt, hunched in dread on the fireman's seatbox, eyes straining ahead, expecting every minute to feel the big Ten Hundred hit the ties and go reeling down the dump. That's what Van Pelt thought of the track on the cutoff.

Stony laughed, drunk with accom-

plishment. He was showing a bunch of dumb brass hats what a cutoff was for. Through station after station they swept. Then in the tunnel of white light a yard-limit board marched into sight.

"Say," Wild Ad barked, "this ought to be Sawlog Junction."

And when he saw that it was, he let off an exuberant blast with the whistle and shook Stony by the hand.

The rest of the run, over the regular main line, was unimportant to Stony Bell.

AT 9.45 Stony Bell slid down the steps of the big Ten Hundred at the north side Springfield station. Not a mail truck in sight. Stiffly he tramped toward the telegraph office, wondering if Melcher and Travis had stayed over on the south side.

"Couple of telegrams for you, Stony," the operator said as he tossed the pink sheets upon the counter.

"Who from?" Stony asked.

"This one is from Mr. Melcher, your super. It says you are fired for running a train over the cutoff without authority. I'm sorry," the op consoled.

Stony took it bravely. What the mischief did he care? They couldn't undo what he had done tonight. "Who's the other telegram from?" he asked with dull curiosity.

"The general manager," replied the op, grinning from ear to ear. "It says to line up four or five work trains. Get ready to put the Sawlog Cutoff in shape for main-line traffic."

A Ring Lost by the Governor's Wife

ON a February 22nd some years ago when I was conductor on the Utah I.C. Railway, I ran an extra consisting of a motor car and six coaches from Salt Lake City to Logan, Utah, for the annual military ball of Agricultural College. This ball was attended by the Who's Who of Utah; it was the high point of the social season.

Returning to Salt Lake City, I picked up a ring in the aisle of one of the coaches; but judging it to be a piece of 5-and-10-cent store jewelry, I gave it to the young daughter of a deadheading brakeman. At the next station, however, I received a wire: "Diamond ring lost by Governor Spry's wife in coach Marretti. Search at once." The child was now eating an all-day sucker. She had tossed the ring on the back of her seat. It was no trick at all for me to recover the "trinket." A few days later I received a letter from the Governor of Utah enclosing $50 check, so the ring must have been valuable.—F. A. Goldsworthy, 30 S.E. Main St., Blackfoot, Idaho.

The Sunny Side of the Track

JUST A HAYSEED

A CERTAIN division superintendent on the Rock Island disliked boomers, preferring to use local men so as to cut down the labor turnover. A boomer, who boasted of working for every big pike in the West, blew in one day, heard about the super's "fool idea," and decided to use strategy. He applied for a job.

"Any experience?" asked the super.

"Naw," said the boomer. "I was raised on a farm up in the hills. Never saw a railroad before. But," he added eagerly, "I'm willing to learn."

"Why do you want a railroad job?"

"Can't get anywhere staying on the farm," was the reply. "No chance to work up in the world."

"Is that why you left the farm?"

The boomer, thinking he was practically hired, grew careless of his speech. "Naw," he answered. "I was first out to ride the hay rake the other morning, but they ran a home guard around me, so I pulled the pin."

* * *

HOW TO GET RICH

COLLIS P. HUNTINGTON, the hardware merchant who won fame and fortune as one of the "big four" builders of the Central (now Southern) Pacific, was annoyed whenever he was asked the "secret" of his success. Among those attempting to interview the railroad king was Homer Davenport, foremost American cartoonist of the Gay Nineties.

Davenport inquired: "Mr. Huntington, what would you advise a young man to do to get rich?"

The reply was: "Take ten thousand dollars, go down to Mexico, and grow rubber trees."

"But," persisted the cartoonist, "suppose the young man hasn't got ten thousand?"

"In that case," growled Huntington, "I should advise him to go and get it before bothering me with questions."

* * *

"TWENTY MINUTES FOR QUININE!"

"THE GENIUS," by Dave Drawbar, in the May issue of Railroad Stories, tells about a conductor who stopped his train to get milk for a crying baby. It sounded funny, of course, but there is a germ of truth in that fiction story. The earliest trains passing through Chillicothe, O., used to stop to permit passengers to buy a supply of quinine on account of the prevalence of malaria in that vicinity. Conductors would call out: "Twenty minutes for quinine!"

* * *

GERMAN RAILROAD DOGS

THE Great Western, of England, which employs dogs in some sections to clear its tracks of stray sheep, is not the only pike with canine employes. For nearly twenty years dogs have been used by the German Railroad System as guards, also for tracking down suspicious characters and even lost objects. There are more than 700 such animals. Six breeds are used, although the sheep dog has been found most efficient for railroad service in Germany as in England and Wales.

* * *

THE LONGEST LETTER

IT is reported that the longest letter ever written was sent to Edward P. Quinn at Culebra, Canal Zone, being written in crayon by George Clardy on a reel of newspaper stock. In order to read the thing, Quinn unrolled it along the ties of the Panama Railroad. He says it was a mile long. We'd like to hear from anyone in C.Z. who can verify this.

* * *

TICKET REDEEMED AFTER 55 YEARS

ON August 21st, 1882, Frank D. Kimball bought a one-way ticket on the Chicago & North Western from Chicago to Janesville, Wis., but lost it and paid his fare on the train. A few weeks ago his son, Frank W., found the old ticket in a wallet in a trunk in the Kimball home at Janesville. He turned it in and, after some hesitation on the part of C.&N.W. officials, was given a check for $2.74, the original purchase price on the basis of three cents a mile. Can anyone beat this record?

* * *

THE RAILROAD HEN

THERE are plenty of railroad dogs and cats, but this is the first streak-of-rust hen we've heard of. Our hero is a White Leghorn pullet. "Hobo Mary," as she was called, rode some 2000 miles from New Orleans to Los Angeles on the wheel truck on a Southern Pacific dining car last February 13th.

Mary first clucked her way into the New Orleans station, presumably after escaping

from a chicken car. J. H. Harris, a Pullman employe, chased the bird, which thereupon found shelter under the car. Later, at journey's end, Harris was amazed to see the little white hen, now much bedraggled, emerge from a perch on the rods and begin scratching around hungrily for food. What eventually happened to her our correspondent, Bozo Texino, failed to state.

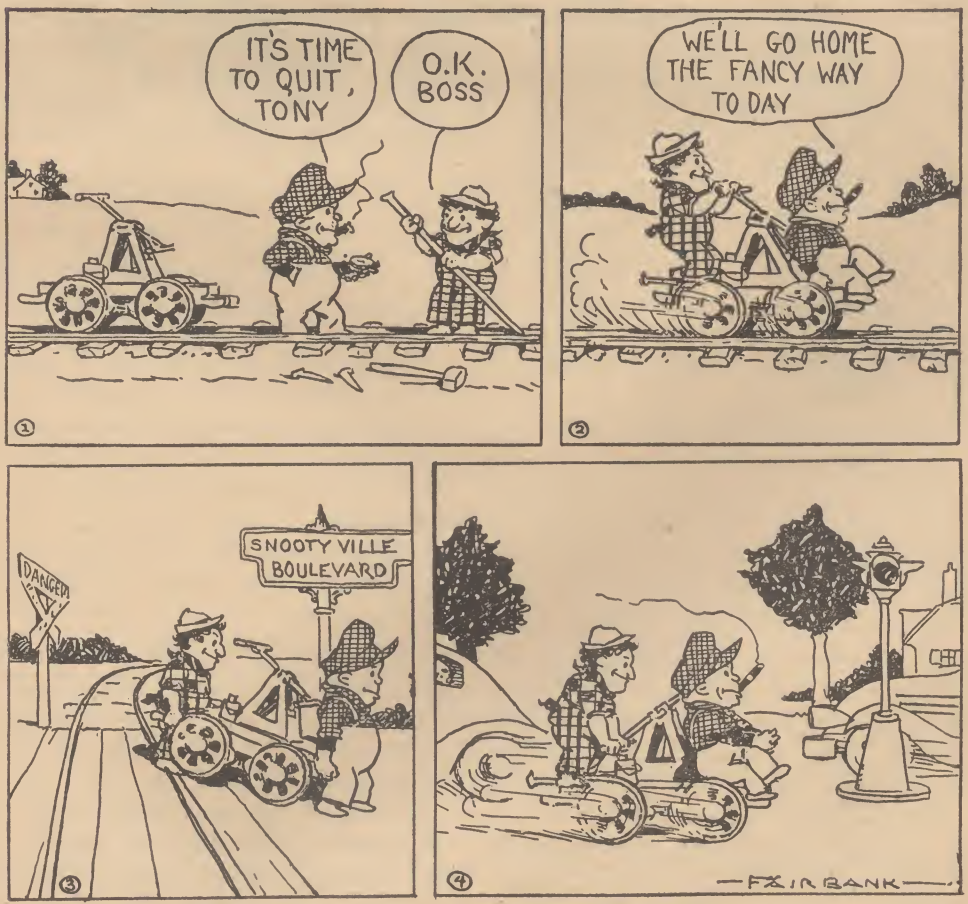
This is actually true. So is the following poultry story from Leon, Kansas: The other day a farmer's wife was distracted from her housework by the persistent tooting of a locomotive whistle on the Frisco Lines and hurried out doors to see what was wrong. Her heart almost stopped beating when she saw the engine moving along slowly with about fifty of her prize turkeys clustered about it. What attracted the birds to the iron horse is a problem we leave to turkey psychologists.

Another poultry incident comes from Bill Piper, 1432 Tampa Ave., Dayton, O. Bill says:

My father remembers when a whole crew made the first trip that any of them had made on the B.&O.'s Monon Division. One night many years ago Dad's cousin, a brakeman, discovered a car filled with dressed poultry and said: "Here's where we get chicken dinner." While the skipper fired up the caboose stove, the shack went to that car and purloined a big fat duck. Soon Mr. Duck was doing nicely on the stove, when in walked a railroad dick! But nothing happened. He merely remarked about the weather and went out again. The crew never knew whether or not the sleuth was wise, but even if he was, he kept his mouth shut.

Maybe that special agent was a dumb guy like Borden in Earp's "Boomer Jones" stories.

"Home, James!"—The Gandy Dancer's Dream



(Next Month, Another Episode on the Hollow-Dome R.R., by Beaumont Fairbank)

TRUE TALES *of the* RAILS

Actual Happenings Told by Eye Witnesses

Boomer's Luck

Boggs Fished Out a Ten-Dollar Bill for Each One of Us as He Had Promised

By "SILENT SLIM" ROACH

THIS adventure might not have happened if the jailer in a little Illinois town had liked Shorty Barret and me. We had been invited into his castle the night after pay day by a kindly disposed gentleman wearing a large star. But owing to our appetites, all concerned in and about the institution decided it would be best to lead us to the city limits and bid us adieu with the hope that we'd never return.

Anyhow, this delay prevented our arrival at Beaumont, Texas, in time to see the great Lucas oil gusher. It had been brought under control and the oil was being run into tanks for shipment when we showed up.

It was a cold, rainy, winter evening. Our stomachs were empty and we were broke, as usual. But knowing from reports that we could snag a job on the Southern Pacific we were not seriously worried.

Well, in practically no time we had stowed some grub under our belts and wet our lips with a stiff shot of "pine top," and were on our way to the night yardmaster's hangout.

Beaumont was a hustling railroad town, and S.P. division point, but hadn't much facilities for handling the rush of cars that the oil boom had

bought. In fact, the yards were blocked with traffic congestion.

The main bigshot on duty that night was a loud-talking, cigar-chewing guy named Conway, who barely gave us one look when I asked him if he could fix us up with a job.

"Yes, I need switchmen," he growled. "Need 'em bad. But I want men who'll take an interest in their work. Boomers are all right if they don't get tanked up and wander off the right-of-way."

I assured him that Shorty and I would always have the company's interests at heart.

"Okay, then; you're hired!" he said abruptly. "I'm putting on another engine tonight. Must get things moving by daylight."

He gave us each a lantern and directed us to the switch shanty across the tracks from his office. It was dark and still raining a steady drizzle.

The foreman was waiting for a crew to man his newly organized outfit. Being an old head, he knew the yards. He helped me find a pair of old rubber boots and a short-tailed slicker, which I hoped would keep me partly dry, and then we went to work.

Engines were whistling to back up. Whistling to go ahead. Whistling to stop. Lanterns waved in all directions. And the moving of cars and engines were as erratic as all these signals. It seemed that nobody knew where they were going, nor why. But few were getting any place, with the yards too full of cars, while long trains were standing out on the main line waiting to get in.

At length Dooley, the foreman of our crew, decided to start. He had a talk with the hogger and soon we were ready to make a stab at getting out of the jam.

AS we rolled around the wye Dooley explained his orders. We were to pick up ten cars of oil at the loading racks and deliver them to the Kansas City Southern on the east side of town. The old K.C.S. transfer had been pressed into use as an unloading track for material coming in for oil wells. So the K.C.S. transfer was arranged to be made out where the Espee crossed the K.C.S.

Of course, such a move required that Dooley ask the Espee dispatcher for orders when he was ready to go. Also, he had to get orders from the K.C.S. before we could use their track—which we had to do in making the delivery to their yards. The whole thing was explained to me while we coupled into the string of ten oil tanks.

As I walked along with Dooley to see if all the spouting oil-pipes were clear, I felt a sudden shower of something on my head. Some hill-billy had shot a hole in the side of a tank and the pressure was shooting out crude oil like a fountain. I had walked right into it, and was soaked.

The short-tailed slicker was like a gutter, as it allowed all the oil to run down into those rubber boots I had borrowed. With both boots full of oil, I was in one devil of a mess, but had to take it.

Dooley escaped the spraying, however, and went on about getting the ten cars out of the loading track. We had to shove ten more empties back to fill before starting for the K.C.S.

Men were rushing here and there with lights, talking in loud excited voices. Even I, a seasoned old boomer, felt enthused over being in such a throng of hurrying rails. In time Dooley gave a signal from the rear end of the ten cars. We pulled out and set the cars on a new track, where a gang of

laborers was at work building more track room.

Then, while setting the other ten empties back into the rack, Dooley slipped on an oily car and fell and broke a leg. I picked him up, carried him to the engine, and put him on the footboard. There he remained while I shoved the ten cars into place. After that, with only the hog, I highballed our engineer to head for town. Soon we had a doctor for Dooley.

Conway, the night yardmaster, snorting and chewing his big cigar, put a hand on my shoulder and said: "Roach, you better make that delivery for me, or there'll be hell popping! You and your partner Barret are old heads at this business. Both of you together can manage it some way, and tomorrow night I'll have more help. You may consider yourself foreman of that engine as long as I have to keep her on."

It seems that I was progressing. Only two hours on the job, and being made a foreman! However, my boots were still full of oil, but I managed to get our engine through congested yards to the ten waiting oil tanks. Then I signaled the hogger to get going.

Before we reached the wye, off the Texas & New Orleans to the S.P.. a call-boy waved me a stop sign. He had an order for me to head up the T.& N.O. to the north. Two drags were occupying the main line east of town and it would be impossible to get to the transfer for a while. The order said:

Yard limits have been extended up the T.&N.O. to Voth, which is nine miles. You will be protected from incoming trains by that order. Expecting you, however, to keep your train in the safety zone and ready to answer a whistle call when wanted. — Conway, Night Yardmaster.

I consulted the hogger about this move and he remarked: "It's okay with me. I been up that way before since the oil boom started."

"Okay it is," I replied, and had Shorty throw the gate for the T.&N.O. main line north.

WE pulled out about a half mile and stopped. An S.P. drag followed us, stopping close to our rear end. My engine was on the north end of the ten cars.

I climbed up in the cab of the hog to get warm while we waited. But not for long. Three times inside of an hour we received a long whistle call to move north. Conway was shoving everything that came into Beaumont up the T.& N.O. to get the main yards straightened out and keep trains moving. So by midnight our engine was standing on the switch at Boggs' sawmill, three miles north of town.

Said I to the hogger: "I'm as hungry as a wolf."

"Me too," he answered.

We both looked out the cab window at the gloomy silent sawmill. Then from around a pile of lumber strode a man with a lantern, coming straight to our engine.

"Howdy, men!" he greeted. "I guess it's kind of surprising to have a visitor, but I'm just having a midnight lunch and thought perhaps you all would like a cup of coffee."

Grinning, I accepted his invitation with thanks, and began getting down out of the cab when the hogger said to me: "You going to leave the train here on the main line?"

"Sure," I responded. "We can hear a whistle call from the house as well as in the cab. Besides, we're protected by the Voth yard-limit order."

"Okay," he agreed, and we both followed the stranger. Shorty Barret and the tallowpot also tagged along. The

place to which we were led proved to be the sawmill boarding-house.

The gentleman with the lantern said: "Come right in, boys! Make yourselves at home!" He sat down at a long table. "Bring on the grub, Sam!"

Out of the rear came a big Negro with steaming coffee and hot biscuits. Then he went back for fried ham and eggs, and we pitched in.

Well, to make the story short, this benefactor of ours was no other than Old Man Boggs himself, the mill owner. He was in trouble and needed help, he explained between slugs of ham and disappearing biscuits.

It seems he had an engine to haul logs out of the woods. She had gotten off the rails about a mile down the track and could not rerail herself alone. Hearing us stop at the mill, Boggs had come to see if he could persuade the crew to bring the S.P. power down his line and help him with his engine by hooking onto it and pulling it over the rerailing frogs.

Our hogger looked at me across the table and winked. We were all impressed with the kindliness of Boggs. So, with only the interests of the Southern Pacific Company at heart, I saw a chance to show Conway that he had a foreman who was alive to the job.

There was nothing to prevent us from cutting off the engine and going to the rescue of a patron of the road—for Boggs was a shipper of lumber over the S.P. Besides, the mill owner had offered to give each of us ten dollars as payment for our trouble.

Forking the last piece of ham, I remarked: "Mr. Boggs, your generosity in giving us a lunch and your lucrative offer induces me as foreman of the crew to accept your proposal."

Well, Boggs followed me to the engine and managed to fish out a ten-dollar bill for each one as he had promised. And to my surprise he added an extra ten to my share. This was quite nice, I thought, accepting it very gracefully.

UNFORTUNATELY, while we were pulling the sawmill hog onto the rails, a whistle call came for us to back up into the yards. Being so far away and occupied at the time, we did not hear it. However, after rerailing the engine for our benefactor and bidding him good night, I discovered a headlight coming down the track from Beaumont.

When the engine stopped, who was on the footboard but Conway himself, with several other men, and behind them was the wrecker. Glaring at Shorty and me, he roared:

"What's the matter, Roach?"

By his attitude I could see he was all steamed up over something; whereupon I began to explain what we had been doing and why, omitting, of course, any reference to the money received.

"The interests of the company," I said, "were obviously paramount in such a case."

"The interests of the company be damned!" he flung back. "While you were doing outside work for these sawmill people you were neglecting your job. Now you're fired. That's what I get for hiring a pair of boomers who say they have the company's interests at heart. You are discharged, both of you! Understand?"

"Sure," I replied with a grin.

My hands were feeling those two ten-dollar bills. Why should I worry? There were plenty more railroad jobs to be had back in those days, and I didn't like this one, anyway.

Hogheads Extraordinary

By "TURKEY" MOORE

LOOKING over the old issues of RAILROAD STORIES I saw the question raised as to whether or not there were any Negro engineers or conductors on American railroads, and the replies cited three or four of them.

Everybody knows that no matter how capable some Negro rails may be, they are almost invariably excluded from the better jobs. I was surprised, therefore, on my first trip to Mexico, to find four colored engineers on the "Alligator" division of the San Luis Potosi district. Their names were Bryan, King, Johnson, and Wilks. Bryan was a mulatto; the others evidently were full-blooded Negroes. Bryan and King were good enginemen, while Johnson and Wilks were the average and frequently in trouble.

The history of how these men came to be there is interesting. In 1900 a combined epidemic of smallpox and yellow fever in Tampico practically tied up the division. This being the principal port of Mexico, a great amount of shipping passed through it. The San Luis Potosi Division operated three sub-divisions between Tampico and Aguascalientes, connecting there with the main line.

The engineers working between Cardenas and Tampico were willing to continue doing so, despite the epidemic, provided they were permitted to double out and not be permitted to lay over there. But they refused to run the locals which operated between Tampico and Tamasopo, at the foot of Rascon Mountain.

The locals being very necessary and no Mexican fireman being qualified for promotion, the company was up against a problem. The traveling engineer then in charge of the "Alligator" had come from the Louisiana Division of the Illinois Central. He advised the master mechanic to bring several Negro firemen, promote them, and assign them to the locals.

The emergency being great and having

no idea how long this condition would continue, the master mechanic consented and sent the traveling hogger to select the men. He brought back seven, each with a good record and not less than ten years' experience as firemen. The seven were given a slight examination on rules and train orders, promoted, and put to work.

When the epidemic was over and conditions again normal, there were more colored engineers than were needed for the locals, so the most efficient ones were put in through freight service. There were but four left when I went to Mexico in 1905. Bryan was still in through freight, the others on locals.

With the exception of a few difficulties over women, Bryan was never in any trouble. As an engineer he had no superior. He could take a train of silver bullion, the most difficult train to handle, down Rascon Mountain with all of the ease and skill of any hoghead working there. The other Negroes were better off on the locals, where the grades were lighter.

On one occasion it almost became necessary for me to go out as fireman for Wilks. I was firing for Bill Shannahan. When called, Shanny was "lit up." The call-boy, himself an American Negro, came to me saying:

"Mr. Moore, if we can't get Mr. Shanny in shape to go out, I'll jes' have to call Wilks, an' I knows you don't want to fire for a colored gentleman."

Believe me, I sure hustled to get Shanny in shape, and was successful in doing so.

Shortly after this Wilks was discharged for an excessive number of demerit marks, and Bryan was put on local in his place. Wilks bought a saloon in *Dona Cecelia,* the Tampico terminal. This he operated for several years, making more money than he had made running engines. He originated a delicious drink which he named a "terminal," and enjoyed good patronage from his white friends. Finally he was shot and killed in an argument with another Negro.

Being from the Sunny South, these men were illiterate and their mechanical knowledge limited. It was somewhat amusing to read their work reports. When some new Cooke consolidated engines equipped with piston valves were delivered, I overheard Johnson tell Harvey Applegate, the traveling engineer:

"I isn't much informed on dese here pistol valves an' I wish you would 'splain 'em to me."

Some of these 800 class were later assigned to the locals, and Johnson drew one of the new "pistol" valves. These engines were also equipped with the E. T. braking equipment. This, too, was much of a mystery to him.

Going north one day, Johnson had a meeting point at Cocoa with the opposite local on which King was engineer. King, holding the main line, was standing just to clear the sidetrack but did not have the switch lined up for the opposing train. Johnson, evidently desiring to show how dexterously he could handle his new braking equipment, miscalculated speed and distance. Instead of making a "passenger stop" as he intended, he piled into King's engine, knocking off the pilots of both locomotives.

Quicker than a flash, King unloaded and came after Johnson, who also had got off his engine to ascertain the damage. With a yell of rage, King punched Johnson in the nose, shouting:

"You will bus' up my new enjine, will you? Take dat, you black so and so!"

The scrap was on a-plenty, and while Johnson was not so clever with E. T. equipment he could and *did* fight. The men were well matched. When the rumpus was over, it could fairly have been called a draw. Both hoggers looked as if they had been through a slaughter house and were in almost as bad condition as their engines were. They climbed back into the cabs of their respective locomotives minus pilots, but plus many bruises and abrasions upon their persons, and proceeded to their terminals.

This was the first time I ever knew of two locomotive engineers making a personal matter out of an accident.

AFTER the strike of the engineers on the Mexican Central back in the 80's, the B. of L. E. was outlawed for many years by that company, it being a dischargeable offense to become a member. The men organized in secret, holding meetings in private homes until strong enough to allow the fact to become known. But even then they were unable to gain recognition of the Brotherhood; and when I went to work there the contract was between the Mexican Central Railroad and its locomotive engineers, not with the B. of L. E.

In 1907, however, the organization was strong enough to demand recognition with seniority written in the agreement. H. R. Nickerson was vice president and chief operating officer of the road. Although he fought hard he was forced to give in, and the B. of L. E. secured an excellent contract.

The Negro engineers, being ineligible for membership in the B. of L. E. by reason of color, were not assessed any cost of obtaining the agreement. But they collected up a sum of money between themselves and gave an appropriate gift to the local Brotherhood chairman with thanks for the better working conditions.

When seniority was an assured fact and written in the contract, a few "non-airs" who received benefits but who refused to join the Brotherhood, endeavored to influence the colored engineers to exercise their seniority rights and claim passenger runs. All of the Negroes refused, remaining on their locals as long as the white American engineers were there.

When the strike was called the Negroes were in a dilemma. They realized the benefits which they had received through the engineers' organization, but not being eligible to join they could not share in strike benefits nor could they expect to get similar jobs elsewhere. All that they possessed was in Mexico and, being thrifty, they had accumulated quite a lot of property. Each of them was married to a Mexican of the *peon* class and had children. So they apologized to the Americans for not joining the strike, and no resentment was held against them.

A revolution had been in progress for two years, and antagonism against the Americans was growing daily. In addition to this, practically all of the locomotives had been converted into oil-burners. A more intelligent class of Mexicans had been employed as firemen and brakemen and were qualified to hold the higher positions. The International Correspondence Schools had established branches in every important terminal in Mexico, employing Spanish-speaking teachers. These boys who had gone firing and braking had studied and passed excellent examinations. Mexico being their own country, they were rightfully entitled to the promotions.

The strike was called for April 17th, 1912. Upon the American engineers stepping off, the Mexican firemen moved over to the right-hand side and took charge. The Negro engineers then took the passenger runs to which they were entitled by seniority, and carried on as though no strike had been called.

Some of the old tropical tramps, doubting the ability of the Mexicans to operate the railroads, stopped in El Paso and other border cities expecting to be recalled. They remained there awaiting this for the rest of their lives, but in vain; a new order had come into being, and the *gringo* was through.

JUST ten years after the strike I was back in Tampico. I had been to South America and had drifted into the oil fields looking for work, for I knew there was no railroad job for a *gringo* any more.

While standing on a street corner watching the crowds pass, I saw a familiar figure dressed in blue overalls come by; and I recognized Bryan, the mulatto, for the years had touched him lightly in passing. Bryan was on his way to his engine to take out No. 4, his passenger run. I asked if he recognized me.

"Yes, sir," he said. "Your face is familiar, but"—he hesitated—"I can't recall your name."

When I introduced myself, the old hogger seemed glad to see me again. He asked about the old-timers, especially Bill Shannahan, and said: "If you ever sees Mr. Shanny ag'in, tell him o' Bryan remembers him an' wishes him well."

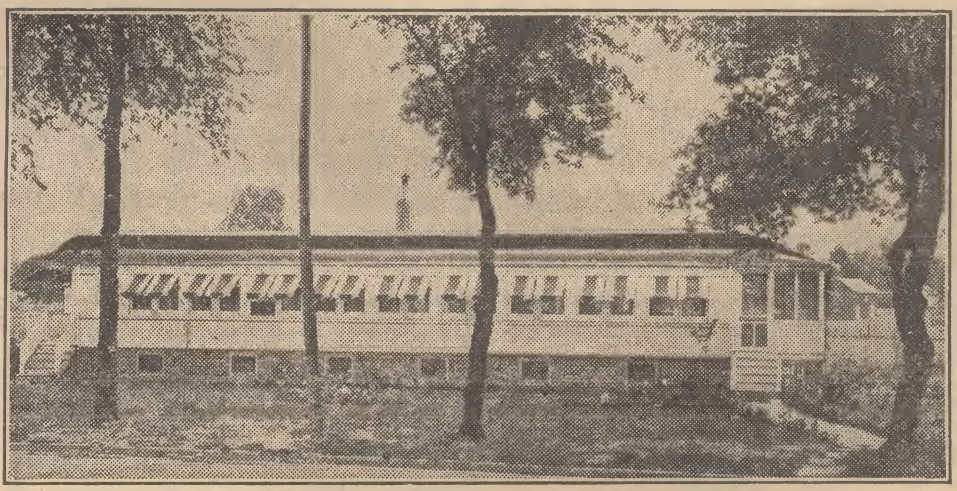
He told me much about himself. The Negro engineers in Mexico had not been molested.

During the big Tampico oil boom Bryan, by investing his money wisely, had become a rich man, but I found him to be the same good-natured fellow he had always been. His love for his engine caused him to continue to hold his job. He was the last of his race running engines in Mexico, all of the rest having died or been killed during the long years of revolution which followed the downfall of President Diaz.

That was fifteen years ago and it is likely that he, too, has since crossed the Great Divide; and he being the last of the old order, another step toward "Mexico for the Mexicans" has been made.

My Parlor-Car Home

By Rev. CALVIN J. GRAVES



The Author Is Rather Proud of the Fact That He Is the Only Methodist Minister Who Has a Private Railroad Car. Notice How It Has Been Rebuilt into a Neat and Cozy Residence

ALL MY life I have been interested in railroading, but somehow I never got a chance to work on the iron pike, although I have a son in Railway Mail Service. The best I could do was buy an old passenger car from the Milwaukee Road and rebuild it into a home. Here I live with my wife, surrounded by an engine picture collection of which I am proud, and memories of the long happy years I spent as a Methodist minister.

There must be a lot of railroad fan organizations in towns and small cities which could use such buildings for headquarters. The cost of the car itself is very little; all you need are the ground on which to locate it and, of course, the carpenter work involved.

I know of at least one club with similar headquarters. The Michiana Model Engineers Guild has a building at Sycamore Street and LaSalle Avenue, South Bend, Ind., consisting of an old interurban car presented to the Guild by the C. S. S. & S. B. Railroad. This car was pictured in RAILROAD STORIES last November.

I was born in 1873 at Boonville, N. Y., half a block from the tracks of the old Utica & Black River Railroad (now part of the New York Central). More than once I was thrilled with rides on some of those engines, specially with "Billy" Reese, who ran No. 67.

One Sunday morning in my early 'teens, instead of going to church I accepted Billy's invitation to climb into the cab with him for a trip to Utica, thirty-five miles away. The 67 was pulling sixty old boxcars that day. About half of them had only the old hand-brakes; the remainder were cripples being taken to the Utica shops for repairs. About midway to Utica the engineer found that his train was rapidly getting out of control. I knew enough about locomotive operation to observe that Billy's hand-brakes were set, he had exhausted his supply of sand, and the 67 was reversed and working backward in an effort to check the speed.

Approaching Marcy station, six miles from Utica, he blew the runaway signal—several frantic whistle blasts—and, as I learned later, the Marcy operator wired a warning to Utica. When we came in sight of the Utica yards Billy Reese left his seat, took me by the arm and led me out to the gangway, yelling in my ear:

"When I push, you jump for your life, and I'm behind you!"

Evidently he had expected the old gal to jump the rails when she hit the reverse curves. The 67 did rock like a cradle, but she held the rails and at length came to a stop, just as the caboose and the last five boxcars toppled over! It was a close shave.

Billy Reese was not at all upset. After taking me to dinner, he brought me back home in the engine cab—in time to attend church that evening. It was years before I told my parents what had happened.

Another big thrill of my early life was visiting the old New York Locomotive Works at Rome with a couple of

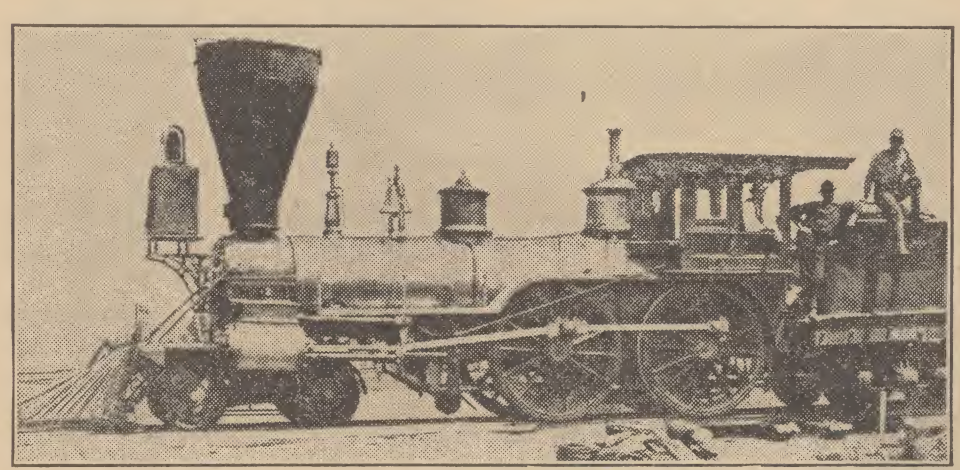


Photo from Jos. Lavelle, 4615 66th St., Woodside, N. Y.

The Locomotive "T. S. Faxton" on the Old Utica & Black River. Calvin Graves Played Around Such Engines When He Was a Boy

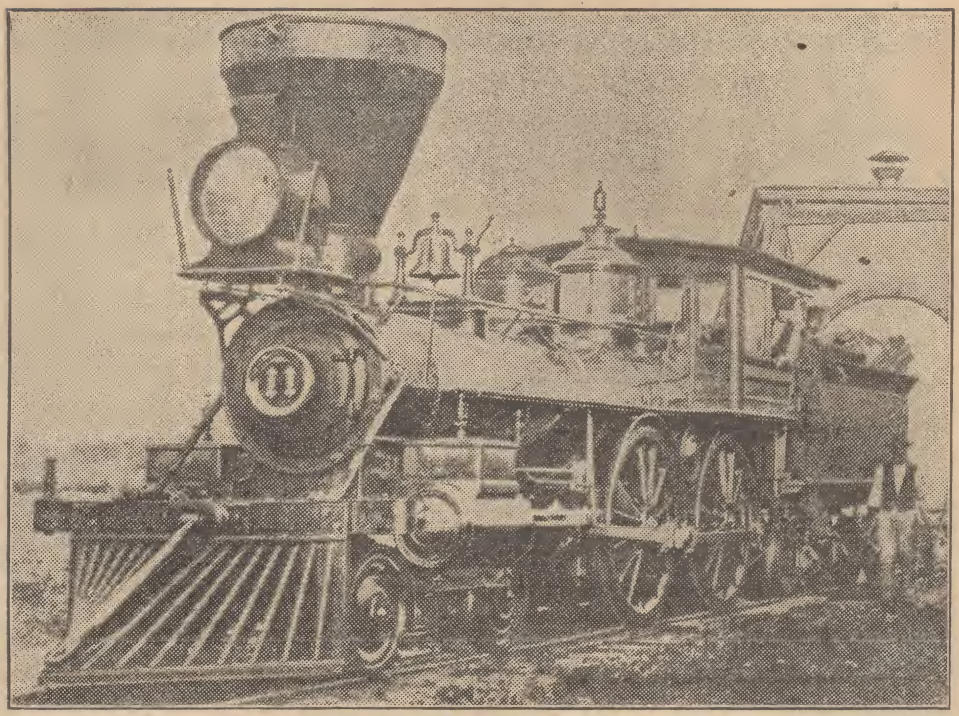


Photo from R. C. Schmid, 466 Lexington Ave., Rm. 1415, N. Y. City

Another Wood-Burner on the U.&B.R., the "W. E. Hopkins," No. 11, Photographed at Clayton, N. Y. She Was Built by the Rhode Island Locomotive Works in 1871 as No. 2 on the Carthage, Watertown & Sackett's Harbor; Later Became 89 on the Rome, Watertown & Ogdensburg

relatives. The man who showed me around the plant gave me pictures of four locomotives built there: N.Y.C.& H.R. No. 678; Atl. & Pac. No. 88; Tucson, Globe & Northern No. 1, and Buffalo, N. Y. & Pittsburgh No. 78. I still have those four photos. They started me collecting engine and train pictures—a hobby which persists to this very day, although, being a retired preacher, I no longer have money to spend on it. Incidentally, I have no pictures to trade, and I will not loan my old photos to strangers.

Having seen a number of passenger cars converted into taverns, dance halls, filling stations, lunch rooms, summer cottages, etc., the wife and I decided to make a permanent home for ourselves in like manner. Going to Chicago, I visited D. C. Curtis, chief purchasing officer of the Milwaukee Road, and bought from him an excellent parlor-car body, including all the interior fixtures and furnishings. This I had delivered to West Avenue, Mauston, Wis., within five blocks of the railroad station, where I converted it into a home with the assistance of my brother-in-law, E. Morton Hilkey.

Our novel residence was established in 1935. It includes a screened-in front porch, a living-room, a combined sleeping room and study, a bathroom and a dinette and kitchenette, all with modern conveniences and plenty of closet space. There is even an attic over the bathroom.

The fine construction and interior woodwork finish of the car body, with its arched vaulted ceilings and abundance of wide windows, coupled with

The Interior of the Graves Home Is Snug and Tastefully Furnished

modernistic lighting fixtures, make a dwelling that is cheerful, light, and comfortable. Each room is decorated in a different pastel color combination. I have named the place *Mary Jane,* in honor of my wife. It is also called *The Sunnyside Home.*

Underneath is a basement containing the hot-water heating plant, fuel room, laundry, workshop, and a well furnished summer "den." Around the building is a lawn landscaped and planted with twenty-two different kinds of flowering shrubs and perennials, as well as a berry garden. Our layout also includes flagstone walks and a garage in the rear.

The whole thing was constructed at much less cost than we would have had to pay for a new modern bungalow of equal floor space. I will be glad to welcome any rails or fans who desire to visit *The Sunnyside Home,* but I cannot undertake to answer mail unless self-addressed stamped envelope is enclosed.

Luxurious Car for Indian Prince

WHAT is believed to be the world's most elaborately equipped private railway car has just been built at Gloucester, England, for the Maharajah of Indore at a cost of $77,500. The car is of steel, its walls lined with asbestos and papered with fine parchment. It weighs more than fifty tons, is sixty-eight feet long and ten feet wide. The construction took more than a year.

Designed to provide a complete traveling residence for the Maharajah and his staff, it has a luxurious bathroom fitted with a shower for the ruler himself, a bedroom for him with a bed five feet wide and full-sized furniture of white sycamore, a drawing room beautifully furnished, and a kitchen with refrigerators, stone sink, and stone cupboard. There are also accommodations for other members of the party, including an elegant nursery and bathroom for children and a room for their nurse.

As the car is wider than the British rolling stock, special arrangements were made to move it to Liverpool for shipment to India. The arrangements included a complicated timetable and keeping both tracks clear en route. At every tunnel and bridge the car had to be moved to one side of the bearing trucks to avoid striking the walls.—Albert E. Chantrey, 119 Burton Rd., Carlton, Nottingham, England.

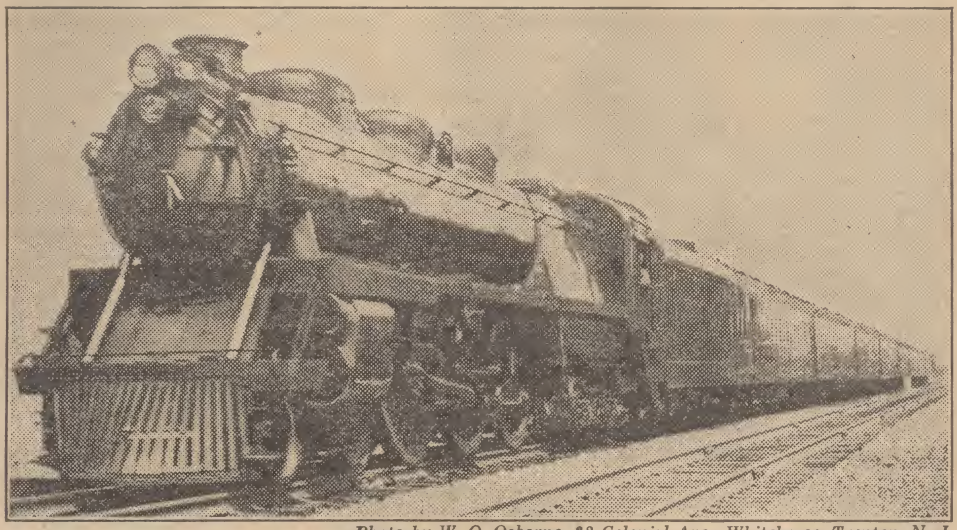


Photo by W. O. Osborne, 38 Colonial Ave., Whitehorse, Trenton, N. J.

No. 9—The Royal Blue

THE impressive thing about all these trains that are making good is the fact that they're doing so under widely different conditions. One is a long-distance Chicago-to-coast transport; another completes its run in less than three hours and worries little about competition except the other trains of its own road; a third covers 420 miles each way in the face of the toughest passenger-traffic rivalry on the globe.

The secret of their success, obviously, does not lie in the circumstances of their location. It lies in the fact that they all have given the traveler more in the way of speed, comfort and price than he has ever got before, and he has forsaken the competition—including the motor bus and his own car—to ride on them. The formula for a train that is making good thus becomes quite simple: if your traffic is there and you aren't getting it, build up these things, not forgetting safety, of course, and you're bound to find yourself with a train that is making good.

Naturally, the formula might not hold good in every case. But it has so far, and there's no reason why it can't be extended. This much it's safe to say: more and more trains will be making good because they will use that formula, and many of them will do so despite the fact that the odds seem to be against them.

The *Royal Blue* did. Inaugurated on June 24, 1935, it promptly carried twice as many passengers as the train it replaced, and it has been doing even better lately. In itself, that is a creditable record. But the conditions the *Royal Blue* has had to meet and conquer in doing so have made it little short of remarkable. For the *Royal Blue* carries people between New York City and Washington, and like all Baltimore & Ohio trains between those two cities, its northern terminal is not New York City, but Jersey City. Between the two lies the North (or Hudson) River,

The Observation Car of the "Royal Blue" (Upper Photo) Is One Big Room, Right Back to the Rounded Tail End; and the Coach (Lower) Is Roomy, Wide-Windowed, and Decorated in Gray and Blue

over which the B. & O. passengers must be ferried.

This situation dates back to the time when railroads were first constructed. For the better part of a century all railroads approaching New York City through New Jersey tied up on the far side of the Hudson. Then came the day, 27 years ago, when the Pennsylvania completed its tunnels under the river, and opened its huge station in Manhattan. For a while the Baltimore & Ohio operated its trains into New York City over P. R. R. tracks, but after the War the Pennsylvania clamped down on its competitors and forced it back to Jersey City.

With its usual resourcefulness, the Baltimore & Ohio converted the handicap into something of an advantage. It bought a fleet of busses which covered Manhattan and downtown Brooklyn, picking up passengers at convenient stations and carrying them right to the side of the train. "When you've made the bus you've made the

When You Catch the Bus You've Made Your Train out of New York City, and When You Arrive It Takes You to Any One of Many Convenient Terminals in Manhattan or Brooklyn. Here Is One of the Streamlined, Air-Conditioned Busses (They Were Designed by Otto Kuhler) at the 42nd St. Station

train," the B. & O. promised. This convenience, often eliminating a subway or taxi ride to the station, was good reward for the slightly longer time it took to get to Baltimore or Washington. As a matter of fact, when you figured in the entire time required to make the journey right from your doorstep, the B. & O. stacked up pretty well.

Still, nobody would be rash enough to assert that the Baltimore & Ohio ever would carry as many people—or half as many—from New York City to points west as the Pennsylvania was carrying. As far as that goes, the chances are slim that it ever will. But that doesn't keep it from trying; and the fact that it is trying hard and trying all the time is the big reason why many people prefer the B. & O. In short, that is the real reason for the *Royal Blue*.

Originally constructed as a six-car, lightweight (aluminum alloy) train, it is now composed of eight cars, weighing around 400 tons all told, and providing about 325 numbered seats, with a total seating capacity of around 375. The eight cars and steam locomotive represent an investment of around $400,000, or, hauled by a Diesel, nearly $600,000.

For the *Royal Blue* has been, and may still be, wheeled by both Diesel-electric and steam engines. The latter is a home-made 4-6-4 type (the *Lord Baltimore*) with seven-foot driving wheels, water-tube firebox and a working steam pressure of 350 pounds. The former is an 1800-horsepower Diesel-electric engine which was built by the Electro-Motive Corporation. The B. & O.'s idea was to test both types of motive power in the same service, though at present the steam engine is handling the train. What its conclusions are or when they will be publicized, we don't know.

No matter which type of motive power demonstrates its superiority—if, indeed, either of them does—the Baltimore & Ohio will have proved, contrary to assertions being made in some quarters today, that the public's chief concerns are the swiftness, the comfort or luxury, and the price it has to pay.

Thus the type of motive power can be judged solely on a basis of its cost and performance, and not on the basis of being

The Royal Blue's Dining Car Is Divided into Two Parts: on One End Is a Lunch Counter Where You Can Get a Good Meal for 50 Cents; on the Other Is the Regular Dining Room. The Kitchen Is Located between Them

built into a new type of train which happens to be popular.

Certainly the B. & O. has left nothing undone to give its customers luxury and speed at the right price. The two B. & O. streamliners (the *Royal Blue's* mate is the Alton's *Abraham Lincoln,* running between Chicago and St. Louis) were the first to be equipped with a tight-lock coupling system, which converts the coupled cars into a single unit without so much as a half inch of slack in the whole train. This, coupled with rubber mountings on the trucks and sealed windows and tight-closing doors, endows the train with a fair claim to being the quietest and smoothest travel device ever built.

Inside and out the *Royal Blue* is good

to behold. Its lines unmarred by breaks between the cars, the deep royal blue of its exterior gives an honest impression of the coolness and cleanliness and good taste inside. With air-conditioning, revolving seats, and diffused lighting, it offers the coach passenger accommodations superior to those in old-time parlor cars. Not only that, but it serves him good food at ordinary restaurant prices. To do this it carries a unique type of diner. The kitchen is located not at the end, but in the middle of the car. At one end is a lunch counter seating ten, where folks who don't want to buy a full-course lunch or dinner can get a plate meal, including dessert, for 50 cents. At the other end is a simple but colorfully decorated dining room seating 30 people.

As we've said, the *Royal Blue* operates between Jersey City and Washington. It covers the 224 miles between the two cities in four hours flat, including four stops. Leaving New York in the morning, it gets to Washington right after lunch, and it completes the round trip in the afternoon. Thus the equipment runs off 448 miles a day, a performance which reduces its per-mile carrying charges to a fairly low level.

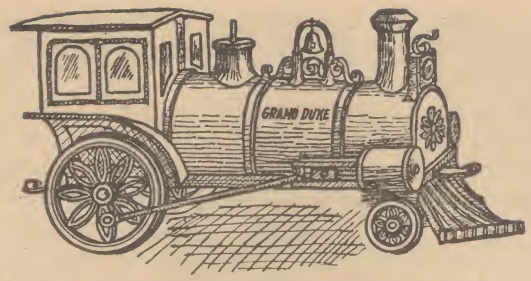
The *Royal Blue* has been doing well. So well, in fact that the B. & O. has had to reserve its coach seats individually for each trip. Yet it is not even as swift as the fastest trains of its competitor. The answer is that the *Royal Blue* makes up for it in the little and big things it gives to people who want something more than just a ride.

And the B. & O. still has a trick or two left. It has replaced its original busses with new streamlined jobs, which it is advertising vigorously. When summer comes these busses will be air-conditioned. What could be more pleasant than to jump into an air-conditioned bus and glide to your air-conditioned train? What could be more unpleasant than to squeeze into a hot muggy subway and ride to a station to wait for your train? In effect, the B. & O. will ask those questions. And the answer no doubt will be that the *Royal Blue* will make good in a bigger way than ever.

The Railroad Labor Movement

EVERY reader who desires to be well informed on the railroad labor movement —its history, its aims, its leaders, its influence, its battles for shorter hours, safety appliances, fair wages, and better working conditions— will welcome the new book, "Brotherhood of Railroad Trainmen," by Walter F. McCaleb, 273 pages, illustrated, $2.50, published by Albert & Charles Boni, New York City.

Unlike most publications of its kind, this book is written in a lively, entertaining style. It combines a history of the B.R.T. with a biography of President A. F. Whitney, and at the same time covers much of the whole railroad labor field since the first of the "Big Four" Brotherhoods, B.ofL.E., was founded in 1863. Special consideration is given to the present-day issues of unemployment, six-hour day, railroad consolidations, long freight trains, big power, and the competition of busses, trucks, airplanes, and pipe lines.



An Old-Style Ives Wind-up Locomotive

Tinplaters and Such

By C. F. CARTER

Author of "When Railroads Were New," etc.

PERSONS of any age or sex who spend their time and money fooling with toy railroads are known, sometimes derisively, as *tinplaters*. How and why did the term originate?

On asking this question of five different men who depended for their bread and butter on toy and model railroad industries I received five different answers, none of which was correct.

However, if you will not let it go any farther, I do not mind telling you in strict confidence that in a more primitive era toy trains ran on rails made of tin plate whereas model trains ran on steel rails rolled from dies scaled down from the American Society of Civil Engineers section, or so it is alleged. From tin plate it was not particularly difficult to deduce tinplaters as a designation for those who did their miniature railroading on that kind of rails.

Although the United States Government has been taking biennial censuses of manufactures for some time it has not yet discovered the difference between toy railroads and model railroads, yet it grows statistically verbose about dolls, doll parts and doll clothes. All kinds of miniature railroads are lumped together as "toy trains."

In 1935, the last year for which figures have been reported, miniature railroads and equipment to the total number of 2,424,442 items not classified were turned out by American factories. Their value was reported as $3,631,472, to which must be added $13,416 as the value of products of establishments making less than $5,000 each.

This gives a grand total of $3,644,888 as the aggregate value of both toy and model railroads produced in 1935. That is not a very large percentage of the $67,667,644 worth of toys produced that year. Compare the pitiful total for miniature railroads with dolls and parts valued at $13,223,763 and dolls' clothes worth $533,483 manufactured during the same twelve months and you may begin to realize how completely the women have gotten the upper hand in this country.

Like the railroads themselves, their toy counterparts originated in Europe. In 1859 Eugene Maerklin established a toy factory in Goppingen, Bavaria. He made all the kinds of playthings he thought would interest children, including cars and locomotives. Being faithful copies of their prototypes, the latter were not particularly

Home of American Flyer Trains, Seven-Story Building at 2219 S. Halsted St., Chicago, with Five Acres of Floor Space and About 800 Employes

Assembly Line In the A. F. Factory, Where Ten Trains a Minute Are Turned Out

beautiful; for, as you know, one look at a European type locomotive of former age is enough, at least to American eyes.

Still young Maerklin did very well with his railroads and other toys—so well that the toy factory he founded is now reputed to be the largest thing of the kind in the world, keeping 1,400 employees busy the year 'round. He has always featured miniature railroads, having the good judgment to make English, French and American type locomotives to please all tastes. A grandson of the original Maerklin has charge of the firm's American branch at 235 Fourth Avenue, New York City.

Foreign toymakers must pay a duty of 70 per cent *ad valorum* on their products. One of the Maerklin locomotives, a live steam model carrying alcohol fuel for a 15-minute run, is a copy of the English *Cock o' the North,* in 0 (1¼ inches) gage. Maerklin was one of the earliest to boost HO gage, which is 16.5 millimeters. Its strongest selling point, it is said, is that you could lay out a whole railroad system in a cigar box.

Earliest of American toy railroad manufacturers was Edward R. Ives, who began in 1868. Two years later Ives Corporation was established at Bridgeport, Conn. It made all sorts of toys, but success seemed to lie in toy railroads. Ives locomotives were of cast iron of none too high grade, hence likely to smash if dropped too hard. While electric locomotives were turned out in 1910, Ives will be remembered for his clockwork engines of which the company sold 1,000,000 before selling out to Lionel Corporation in 1930. The Bridgeport factory closed in 1930. Two years later the Ives line was dropped.

Up to 1930 Ives cars were lettered with initials of various railroads. Other manufacturers of toy railroads followed his example for a time and then changed to the use of their own firm names, but they are getting back to railroad initials again.

Live steam locomotives had a considerable vogue until about 1910. But they were a bit mussy for fussy housekeepers and they were somewhat dangerous things to have around. If you were killed in a toy locomotive boiler explosion you had to pay your own funeral expenses; whereas if you could manage to be killed in a full grown locomotive explosion you could sue the company.

Hornby, Ltd., the English firm which introduced Meccano building materials for children, soon added miniature railroads

Scenes in the Lionel Plant at Newark, N. J., Showing the Manufacture of Toy Scenery and the Spraying of Tank-Car Bodies with Aluminum Paint

to his line and is now rated as the world's largest in that specialty. Bassett-Lowke (not two men, but one, with a double-jointed English name), Bonds, and Leeds, like Hornby, Ltd., all make miniature railroad stuff, from simple toys up to models costing up to $2,200, or even more when built to order. Add to this the 70 per cent duty imposed by a paternal government to discourage the pauper toys of Europe, and you can see that miniature railroading may sometimes become expensive.

"Buddy L" trains, introduced by the Moline Pressed Steel Co., of East Moline, Ill., in the early 1920's, is no longer on the market except for streamliners.

Away back in 1911 J. F. Strombeck joined his friend Becker in forming the Strombeck-Becker Co., in Moline, Ill., to make handles and other turned wood specialties. When molded plastics began to crowd wood specialties off the map Strombeck-Becker Co. had to scratch gravel. Thinking of something to take the

place of their unwanted products produced no results until Becker, going home one evening, was held up at a crossing by a freight train not in a hurry. He had stopped to wait right in front of a Woolworth emporium in which, he was informed by a sign, nothing cost more than 10 cents.

The freight train suggested a new product in wood. Woolworth, where everybody did their shopping in recent years, suggested a market. A locomotive was shaped out of wood next day which, being shown to the Woolworth manager, won a grudging promise to try it at 25 cents. All Strombeck-Becker could do under the circumstances was to turn out and sell a paltry 2,000,000 wooden locomotives in the ensuing twelve months. Then they tried a dollar model. Its reception encouraged them to offer a $2 model, and now they don't care whether anybody wants wooden handles or not.

AN industry turning out an aggregate production valued at $3,644,000, according to government statistics, of which aggregate sum the greater part is absorbed by two concerns, doesn't leave any too much for the others in a total of 60 manufacturers of toy and model railroad equipment.

One of the big fellows is the American Flyer Manufacturing Corporation, of No. 2219-39 South Halsted Street, Chicago, founded 1907. W. O. Coleman, Jr., entered the firm in 1914 and became president upon the death of his father in 1918. In the thirty years since it began American Flyer has made 10,000,000 trains, a world record.

For all these trains to run on the company made 16,000 miles of track, equivalent to two-thirds the distance around the earth at the equator. The railroad factory occupies a seven story building in Chicago, embracing five acres of floor area. During peak seasons 800 persons are employed, and they can turn out 600 trains an hour.

All railroad equipment conforms with railroad blueprints so far as practicable—a saving clause which separates it from the exclusive model railroad class. In 1936 American Flyer trains were made on new designs in trains, track and equipment. The high speed track has curves of 40 inch radius which permits maximum speed and does not necessarily force the rest of the family to move out of the house while the owner is operating his railroad.

The new Hudson type locomotive with four cars and 18 sections of model track retails for $22.50, which gives you an idea of prices. Other new type trains include a streamlined Pennsylvania locomotive, B. & O. *President Washington* type locomotive, and Union Pacific, Burlington and Hiawatha streamliners. More electric trains were made by American Flyer Manufacturing Co. in 1936 than in any previous year.

The Lionel Corporation, of 15 East 26th Street, New York City, turns 2,400,000 pounds of steel into toy trains a year, in three factories in the suburbs of Newark, N. J. Many things besides locomotives and cars are made in those factories, including signals, water tanks, roadside scenery, redcaps, conductors and other figurines, including a crossing watchman who sticks close to his shanty until a train approaches, when he comes out and waves a red light at the world in general and retires to the seclusion of his shack when the train passes.

In fact, Lionel Corporation makes such a long list of things that—well, one day a gentleman from Argentina walked into the Lionel show room just off Fifth Avenue, beckoned to an attendant and began pointing out items he wanted. When the list totalled $3,000 he wrote out a check for that amount and turned it over with instructions to send the goods to his pet nephew so they would reach him on Christmas Eve, 1936, and that was that.

Joshua Lionel Cowen, President of the Lionel Corporation, was born in New York City in 1880, and educated in city schools and colleges. As a youth he was apprenticed to Henner & Anderson, electricians.

When Joshua was twenty years old he

saw possibilities in the business of making electric toys; but there were already a number of makes of electric trains on the market, including Voltamp and Carlisle & Finch, so for the first few years Cowen's trains attracted little attention. Remote control of electric trains had been introduced by the Voltamp Co. in 1914; eventually it was adopted by Mr. Cowen.

He makes better goods now, but his products were passable for the time. By making flash lights and other items he managed to get along until 1905. Then one day Mario Caruso, who had become dissatisfied with his prospects as an engineer in the Italian Navy Department, associated himself with Mr. Cowen and soon became a partner in the Lionel Corporation.

Dry batteries as motive power of the Lionel locomotives and trains gave place to electric current supplied by the local public utility. New types of miniature railroad equipment were constantly being devised, including a "chugger" to imitate the puffing of the locomotive and a whistle so realistic that automobilists who hear it step on the gas to beat the train to the crossing. A small relay allows current from the third rail to operate a tiny blower in the tender supplying air to the whistle. The motor blower must be delicately adjusted so it will not slow down the train.

Among other names which should be added to the list of tinplate railroad equipment manufacturers are Bing, KB, Twin-Train, and Fandor (Kraus) in Germany; and Boucher, Hafner, Katz, Marx, and Dorfan in America.

Model Engineers and Clubs

ITEMS are printed free of charge here and in The Model Trading Post. Keep them short and write plainly. If you typewrite, leave a blank line under each line that is typewritten.

Items for August issue must be received before May 19. Preference is given to those accompanied by our latest Reader's Choice coupon. Clip it from page 143 or make your own coupon.

* * *

When writing to anyone listed in these pages use 2¢ reply postal card or enclose self-addressed stamped envelope. Many persons won't reply to those who neglect this courtesy.

* * *

For answers to modelmaking problems, query A. C. Kalmbach, *The Model Railroader,* Wauwatosa, Wis., mentioning *Railroad Stories* and enclosing stamped envelope.

* * *

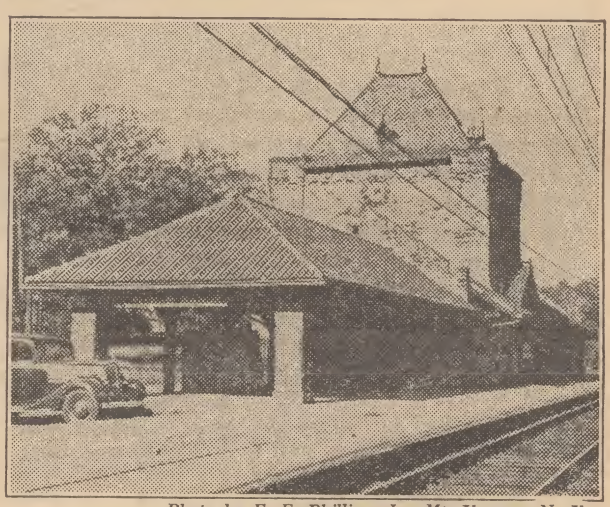


Photo by E. F. Phillips, Jr., Mt. Vernon, N. Y.

Headquarters of Westchester Model Club, Formerly Pelham Manor Station, on the Harlem River Branch of the N. Y. N. H. & H.

If *your* model railroad club is not represented here, it's because you need a live press agent. Fire the deadhead and get yourself a publicity man who really knows the job. We'll gladly cooperate with any reader who desires to organize a model club in his locality.

Finally, if you want to help build up this model department, show the Editor that you're interested by listing it in your Reader's Choice coupon. The more votes this department gets, the more space it will be given in future issues of RAILROAD STORIES.

WESTCHESTER MODEL CLUB, INC., the former Westchester Model Railroad Ass'n, with scope widened to include model ships, boats and airplanes, has grown to 35 members and is now housed in Pelham Manor Station, through the courtesy of the N.Y.N.H.&H.

Track laying on the "Eastern Lines," the club's railroad, began Jan. 19. Waiting and baggage rooms have been transformed into a location for an extensive railroad layout on ¾ inch scale. It is to have 180 ft. of double-track main line, frt. and coach yards, hump, roundhouse, turntable, car and loco shops, a coal mine, a freight cutoff, and a mountain division. The main terminal will be a replica of Pelham Manor Station 20 feet long. Several members are building models of New Haven locos, both steam and electric.—E. F. Phillips, 61 W. Grand St., Mt. Vernon, N. Y.

A GOLDEN spike was driven March 13 to complete America's newest model railroad, the Milwaukee-Waukesha Division of the Milwaukee Union Terminal. This is a new pike, complete with yards, telephone dispatching system, engine terminal, etc., 1¼ inch gage.

Builders of this division, the Model Railroad Club of Milwaukee, secured a right-of-way from the Milwaukee Road in the form of the old National Ave. passenger station, no longer used. In it were laid 1100 feet of model track, planned to represent a line from Milwaukee to Waukesha, where it could tap the Soo Line traffic as well as a lucrative suburban business.

The line is laid out exactly as a real railroad would be if one were built between those points, including the necessary amount of single and double track, sidings, and even a three-track relief stretch where the traffic would be heaviest. Grades follow the actual contour of the country.

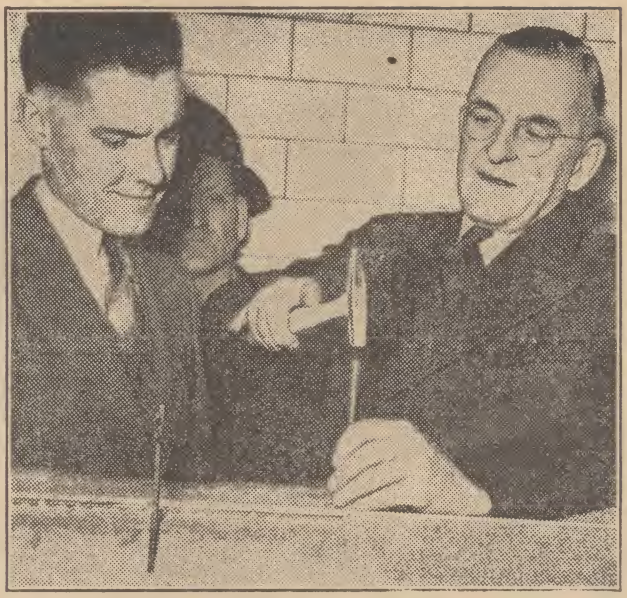
The chairman, R. A. Sperry, of the Illinois Freight Ass'n, drove the golden spike. Club officers gave short accounts of the road's construction. C. H. Bilty, mechanical engineer of the Milwaukee Road, told about the designing and building of the *Hiawatha*.

Hank Moody, engineer of the *Hiawatha* on the Milwaukee-Chicago run, pulled the miniature throttle and moved the first train on the new line—a scale model of the *Hiawatha*. Bill Dempsey, who broke the world's steam-train speed record in 1934 with the Milwaukee 6402, also handled a train over the division.

Operations on this model pike follow the standard code, and trains move by timetable and train order. There are five open stations, two of which are interlocking towers. The dispatcher is located in another room where he cannot see the trains, just as often happens in real practice. Engineers bid in runs according to their seniority. A Brownie system of demerits is used—and used plenty! The club is located at 215 E. National Ave., Milwaukee, Wis., and there is a standing invitation for those interested to come down some evening. —A. C. Kalmbach.

* * *

A NEW "Handbook for Model Railroaders," by W. K. Walthers, has just been issued by The Modelmaker Corp., Wauwatosa, Wis.; $2. Diagrams, tables and a wealth of photographs make this a worthwhile book. In addition, it contains information on every problem the model railroader is likely to meet, from planning the layout and scenery to organizing a complex time-table system. Motive power and power supply, signaling and speed control are discussed and simplified. Every kind of rolling stock is dealt with out of an unusually broad experience. We commend this book to every serious model railroader.—David Marshall.



Milwaukee Journal Photo

R. A. Sperry Driving the Golden Spike on the New Pike of the Model R. R. Club of Milwaukee. At the Left Is Grant Oakes, One of the Members Who Was Most Active in the Work

SOUTHWESTERN MODEL R. R. ASS'N (HO gage only) meets at members' homes first Sunday of each month. No dues are charged, but donations are appreciated. The only membership qualification is that a fellow must build something in HO gage. Secretary J. A. Warner, 213 E. Baldwin St., Whittier, Calif., predicts they will soon have 100 members.

* * *

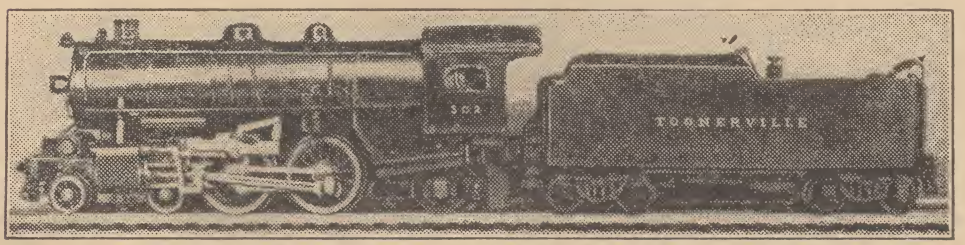
EDWIN F. LEGAWIEC, 1032 E. 19th St., Paterson, N. J., wants to get in touch with boys in or near Paterson interested in forming a model club.

* * *

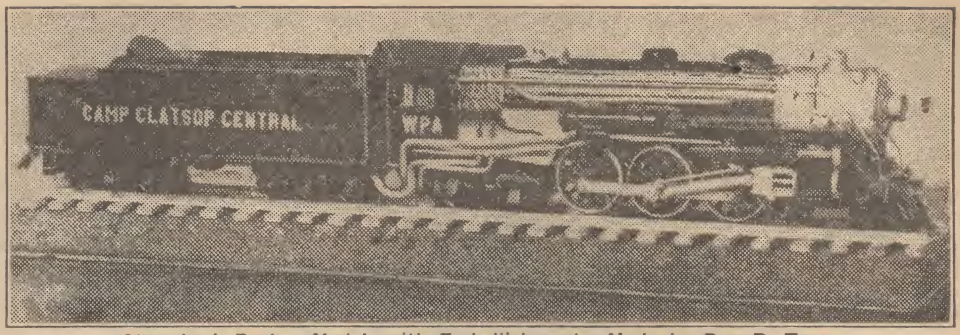
BALTIMORE SOC. OF MODEL ENGINEERS, 1613 N. Chester St., Baltimore, Md., was inc. Feb. 26, '37—first group of its kind to incorporate south of N. Y. Besides maintaining a permanent model railroad in its clubrooms, the society is sponsoring inspection and field trips. N. Y. was visited in Feb. A trip to Baldwin Loco. Works, Eddystone, Pa., is contemplated. This society aided in celebrating the 25th anniversary of the Engineering School of Johns Hopkins Univ. by exhibiting a complete model railroad. E. L. Harlan is pres.; Carl J. Muth, sec.

* * *

SACRAMENTO VALLEY MODEL RAILROADERS' GUILD, with an engine picture division, organized last fall, now has 7 members. Sec. Rexel Coomes, 3612 Bret Harte Court, Sacramento, Calif., wants to hear from anyone in Calif. who is interested.



This Beautiful Quarter-Inch Scale Atlantic Type Model, Alcohol-Fired, Was Built by L.B.S.C., the Famous Live-Steam Model Engineer of London, England, for Joe T. Loziner, East Haven, Conn.



Strombeck-Becker Model, with Embellishments, Made by Don R. Tryer

MY ¼ inch scale model of a N.Y.C. Hudson type (*see* photo) was built with the aid of a Strombeck-Becker model and finished with pieces of soft wire, tin, and whatever else I could find. Driving-wheels were solid but I cut spokes with the aid of a fine saw, small round file and sandpaper. The counter-balance is plastic wood.

Dummy air compressors were made of butchers' wooden skewers. Pilot is of metal. The dummy pipes are wire bent, held in place by steel pins bent U shape. The headlight came from an old pencil flashlight with wire connection to the rail. Truck frames and journal boxes are made from thin cigar box material glued to the original truck.

Couplers were sawed from wood and recessed into front and back beams. The couplers, grab-irons and ladder on back of tank are made of paper clips. The bell is cut from a cartridge shell and filed to shape. Air and signal hose are of insulation slipped off wire. Dummy rivets came from heads of steel pins.—Don R. Tryer (*former S.P. shopman*), Camp Clatsop, Warrenton, Ore.

* * *

WEST JERSEY R. R. CLUB, 639 Clinton St., Camden, N. J., visited N. Y. on Feb. 4, including terminals, roundhouses, trolley barns, etc., in Jersey suburbs. The club welcomes visitors, especially Wed. nights. Recently it had visitors from Phila. and Wilkinsburg, Pa., and several N. J. towns.

* * *

MODEL-MAKING has been my hobby for more than 30 years. I have a completely equipped all-electric home workshop, including milling attachment, high-speed drill press, air-compressor outfit for testing models, and outfits for brazing and silver soldering. I have built 20 models, both electric and steam operated, most of which I have sold. I have a steam-operated model of a Wm. Mason built in 1856 which nobody else can have. Now building a Pacific, ½-inch scale.

Grandfather was an engineer on the Erie, running between Susquehanna and Hornellsville. Father also ran on the Erie and later on the Lackawanna. His brother, the late Frank Clow, was an engineer on the Northern Pacific. He refused to stop in a hold-up and was shot dead by a bandit.—A. F. Clow, Room 4313, Interstate Commerce Commission Bldg., Washington, D. C.

* * *

PACIFIC RAILROADERS CLUB, which has an O gage layout, now has running rights over Sunset Western and Inter-Mountain layouts. Instead of an initiation fee, the members buy toy trains. A small operating fee is the only club charge.—I. W. Shank, 1458 29th Ave., San Francisco.

* * *

BROOKLYN R. R. CLUB has established a non-residential membership for those who cannot attend regular meetings. We have a full line of hand tools and necessary machine tools at the disposal of non-resident members. Our railroad, O gage, ¼-inch scale, is open to them for testing new equipment. The first Friday of each month is devoted to semi-technical films. Our club has voted to take in those interested in HO gage. It also welcomes ¼-in. scale live-steam live steamers, who find the 50-foot straightaway double-track handy for tests.—H. W. Saler, Vice Pres. and Gen. Mgr., 338 74th St., Brooklyn, N. Y.

"THIRD RAIL," 28-page magazine for model railroaders, neatly mimeographed, is issued monthly by Rhode Island Brotherhood of Model Railroaders; edited by the librarian, James A. Mills, 29 Williams Ave., Edgewood, R. I. Associate editor is Theodore K. Speidel, 89 Somerset St., Providence, R. I. Contributions welcomed.

* * *

ST. PAUL CRAFTSMEN'S CLUB is interested in contacting model railroaders in this area. We operate an O gage scale system at headquarters. Meetings are held Friday evenings.—James R. Sullivan, Secretary, 941 Westminster St., St. Paul, Minn.

The Model Trading Post

COPIES of *Railroad Stories* prior to Nov. '36; of *Railroad Man's Magazine* prior to '19; of *Model Craftsman* and first 5 issues *Lionel Magazine* wanted. Will pay cash or trade std.-gage Lionel eqpt., perfect cond.—Charles Vallette, 1906A Penfield St., Phila., Pa.

* * *

FOR SALE: O gage ref. car. (Herald) for fruit-growers' express with A.R.A. fully-sprung trucks, hand lettering, details such as ice hatches, end beams, etc., bottom and roof especially well-built, virtually new, price $5.—Raymond Salmi, 1640 Overing St., Bronx, N. Y. City.

* * *

LIONEL mags., vol. 3 No. 2 to vol. 6 No. 5, to trade or sell; all good cond. My Keystone Ry. now has 2 steam type and 2 elec. type engines, 18 finished frt. cars, 3 passr. cars under construction, and gas-elec. car built from plans printed in *Railroad Stories*, about 100 ft. trk., 2 prs. switches, etc. Other model builders, please write.—Robt. Noel, 1715 Fifth Ave., Altoona, Pa.

* * *

BEST offer in st.-gage eqpt. or cash takes my stamp collection, over 1,300 different—H. E. Pape, 115-53 173rd St.. St. Albans, N. Y.

* * *

I HAVE a 35 mm moving-picture machine and 7,000 ft. of film, cost $25, to trade for O gage locos or Erector loco set.—Morris Fraser, 7330 Clarence Ave.. Chicago.

* * *

WHAT am I offered for O gage Lionel No. 80 tank car, 806 cattle car, 902 gondola, 8 secs. Ives std. trk. and 5 secs. curved?—Arthur B. Buchanan, Jr., 4 Willowdale Ave., Waterbury, Conn.

* * *

WHO will swap a Lionel 260E loco and tender for my 251E loco like new? Also, what have you to trade for Lionel 813 cattle car, 811 lumber car, 817 caboose, 253 loco, some A. F. track.—E. L. Vogel, 919 Schiller St., Louisville, Ky.

* * *

I WANT old model engines and cars, and also new model, for which I'd swap 26 vols. business course, bound in leather, a metronome, man's watch, etc.—E. MacDougall, 9202 215th Place, Queens Village, N. Y.

* * *

MUCH Lionel and Ives std.-gage eqpt., including pass., box and coal cars, switches and crossovers, offered

for cash or will accept in trade old copies of *Electric Ry. Journal* 1910-1925 preferred. Send for full list.—Richard Wonson, 263 Belmont St., Fall River, Mass.

* * *

I OFFER A. F. steam type elec loco & tender with 50 Watt transformer for $10.—Thomas Stephenson, 211 W. Jones St., Raleigh, N. C.

* * *

MUCH tin-plate O-gage wheels and trucks to trade for scale O gage eqpt. I can use a small Lionel station, or what have you?—Ralph Perry, 76 Green St., Brattleboro, Vt.

* * *

I OFFER for cash loco 261E and more than 100 secs. of track, 3 manual switches, engine 253 and 3 new Lionel illuminated cars, 601-2-3.—John Magee, Appleby School, Oakville, Ont., Canada.

* * *

LIONEL 10E, 337, 511, 512, 56, 127 and curved C track for sale.—Stanford Setchell, 1219 63d St., Brooklyn, N. Y.

* * *

I'D LIKE to buy a 7¼"-gage 4-4-0 steam loco, like U.P. or N.W.P., with strt. track.—Earl Williamson, 13010 Kercheval Ave., Detroit, Mich.

* * *

I OFFER 4 books and photos on boxing, wrestling, muscle-building by Liederman in exchange for O or OO gage elec. steam type loco and eqpt.—James Woodruff, 3604 E. 18th St., Kansas City, Mo.

* * *

CASH offered for British or any foreign O gage eqpt. Mention mfr.—Robt. M. Hoffman 428 E. Hillside Ave., Barrington, Ill.

* * *

I HAVE for sale or trade 1st day C.A.M. 9 airmail covers, complete railway-mail training course; Gopher B eliminator; Radioptican postcard machine; Atwater Kent table set and loud speaker. I want old toy train catalogs and mags., and both O and std.-gage motive power.—A. R. Miller, 3448 33d Ave., S. Minneapolis, Minn.

* * *

WINCHESTER rifle, model 60-A to trade for Lionel derrick No. 810 with or without trucks or couplers or any sort of ¼"-scale eqpt.—Henry Kaminski, 417 Third St., Pikeville, Ky.

* * *

WHAT AM I offered for set of Lionel std.-gage eqpt.? Send for list.—W. D. Buckley, 13 Fairview Terrace, Englewood, N. J.

* * *

ALL *Railroad Stories* for 1933-4-5 & a lot of *Engineers' Journals* offered in trade for O gage eqpt.—Paul R. Ridner 422 Academy St., South Orange, N. J.

* * *

I WANT Lionel E locos, 600 & 800 cars and other Lionel eqpt. for which I offer in trade 6 secs. A. F. std.-gage strt. track, 2 O-gage double trucks, 460 A. F. fuse set, 2 pr. Lionel 21 switches, O-gage Build-Loco No. 4, 1 A. F. log car, 45 secs. O-gage track, 2 Ives O-gage 1678 cattle cars, 2 Ives 1627 gondolas.—Joe Nail, China Springs, Texas.

* * *

I OFFER to build and letter HO frt. cars for sale or trade for HO motive power or supplies.—Wm. Schapp, 711 Lincoln Ave., Palmyra, N. J.

* * *

WHAT am I offered for a new 6-wheel A.F. loco?—Wm. Deppe, 188-11 Linden Blvd., St. Albans, N. Y.

* * *

I HAVE ½ in. scale, coal-fired, steam-operated Atlantic type model loco costing $500; would sell for $150. A. F. Clow, Room 4313, Interstate Commerce Commission Bldg., Washington, D. C.

* * *

WANTED: Lionel No. 602 baggage car in blue finish. State condition and price.—Geo. Bilderback, Box 673, Weirton, W. Va.

* * *

I OFFER to sell or to trade for O or std.-gage eqpt., good cond.; set *Everybody's Cyclopedia;* loco. photo. collection; No. 7 Erector set with motor; A.F. pass. cars 1205, 1206, 1207, 1306; complete file *Railroad Stories* Jan. '34 to date, and odd numbers before '34.—Ralph Yerger, 537 Queen St., Northumberland, Pa.

* * *

OFFERS asked on this Lionel std.-gage eqpt.; loco. 408E, like new; 8E, good; 8, fair; 33, poor; obs car 414, parlor cars 412, 413, 414, like new; tunnel 119, good. Also some fiction and mech. mags.—Andrew Kassa, 572 Broadway, Passaic, N. J.

NEW Lionel No. 81 controlling rheostat to trade for 10 copies *Railroad Stories.* Also W. P. train orders to trade for East train orders.—Robert Burger, 965 McClatchy Way, Sacramento, Calif.

* * *

I WANT 2 Lionel O21R hand switches, hand-operated.—Chandler Robinson, 56 Redfield Parkway, Batavia, N. Y.

* * *

FRT. cars for sale: In ¼"-scale, Armour, M. D. T. Pacific Fruit Express, all Westbrook, Hawk, D.&R.G.W. —Gordon Thomson, 445 Gramatan Ave., Mt. Vernon, N. Y.

* * *

I OFFER for sale this Lionel O-gage eqpt. in excellent cond.: loco and tender 259; 2 Pullmans 529; obs. car 530; gondola 902; coal car 803; cattle car 803; contr. rheostat 95; 12 secs. curved, 8 secs. strt. track. —F. Kernan, 6725 Bartmer Ave., University City, Mo.

* * *

ERECTOR set (val. $20) offered in trade for O-gage eqpt. Send list of what you have.—Bernard Gasman, 10 Argyle Rd., Brooklyn, N. Y.

* * *

WANTED: HO-gage eqpt. Will trade OO gage P-5a loco and cars, ¼ in-scale eqpt. O gage Lionel, 116 size print, or copies of *Official Guide.* I also want P.R.R. torpedo loco.—N. W. Rehfuss, 1739 N. 43rd St., Camden, N. J.

* * *

I WILL sell the following O-gage Lionel eqpt.: strt. and curved track, switches, locos, frt. and pass. cars, transformers and crossovers; send 3¢ stamp for list and price.—J. B. Kleinschmidt, 616 S. 5th Ave., Maywood, Ill.

* * *

WHAT offer for Lionel std. crossing gate 77 and 339 blue Pullman, both excellent cond.?—Herbert Iselin, 1 W. 85th St., N. Y. City.

* * *

WANTED: Ives, Dorfan, Hoge and Bing eqpt., cars and catalogs.—A. McDuffie, 2306 Market St., San Francisco.

* * *

I'LL trade 2 Dorfan 52's, one Lionel 1651E and 3 Lionel 6 in. coaches for good 254E and distant control rheostat.—G. E. Condey, 5329 Skillman Ave., Woodside, N. Y.

* * *

CORRECT C.P.R. stack and domes for small models for sale; also other castings. Write for list.—E. B. George, 52 Clarence St., London, Ont., Canada.

* * *

WILL swap or sell both O and std.-gage eqpt. for other O and std. eqpt. What do you want and what do you offer?—E. A. Gardner, 2261 Dewey Ave., Rochester, N. Y.

* * *

WANTED: Used HO-gage eqpt. Will trade *Lionel Mags.*, old copies of *Official Guide,* etc.—Edward Kaseman, Jr., Wheelerville, Pa.

* * *

FOR SALE: New A. F. Torpedo type O gage, remote-control loco and tender 640 and Ives 9 in. pass. cars; or will trade for trestle type bridge.—John Roberts, 435 Fowler St., Roseburg, Ore.

* * *

MODELS of any type of old open or closed trolleys made to order: 15 in. 20¼ in. 26¼ in. sizes, or kits, wood cut to fit cardboard, etc., ready to build $1.75, $2.50, $3.50. Full-size plans 35c, 75c and $1.25. Complete 26¼ in. model, $5.—Paul Willis, 1737 N. 19th St., Phila., Pa.

* * *

I OFFER cash for used and unfinished HO eqpt. and parts.—Arthur Kafarski, 3419 McLean, Chicago.

* * *

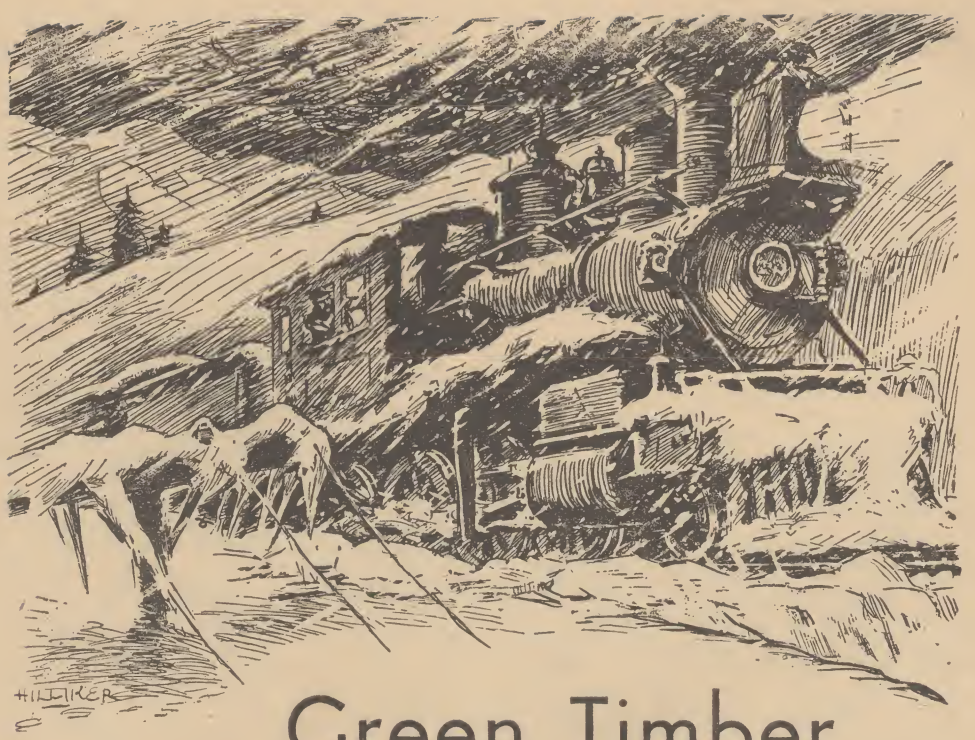
BEST offer takes this A.F. set: Remote-control, steam type loco and tender (cost $13.50); 3 pass. cars 9½ in. long with brass trimmings; 75 watt transformer; 8 curved and 8 strt. track.—Clark Sullivan, 2633 Tulare St., Fresno, Calif.

* * *

FOR SALE or trade for O or HO-gage eqpt. the following Lionel std.-gage eqpt.: Engine 10, two Pullmans 337, one obs. 338; engine 8, two Pull. 35, obs. 36 (red); eng. 380, flat 11, ref. 514R, gondola 512, oil 515, cattle 113, cab. 517; also have track, etc.—Wm. J. Bertele, 2707 W. Sedgley Ave., Phila., Pa.

* * *

WANTED: std.-gage of any kind. Will trade 2 neon signs, or will buy.—John Hogan, Box 133, Lima, O.



Green Timber

That's What Student Brakemen Are Called, and It Costs a Road Plenty to Make Rails Out of Them

By G. A. LATHROP

Ex-Fireman, D.&R.G.W.; Author of "The Last Rockaway," etc.

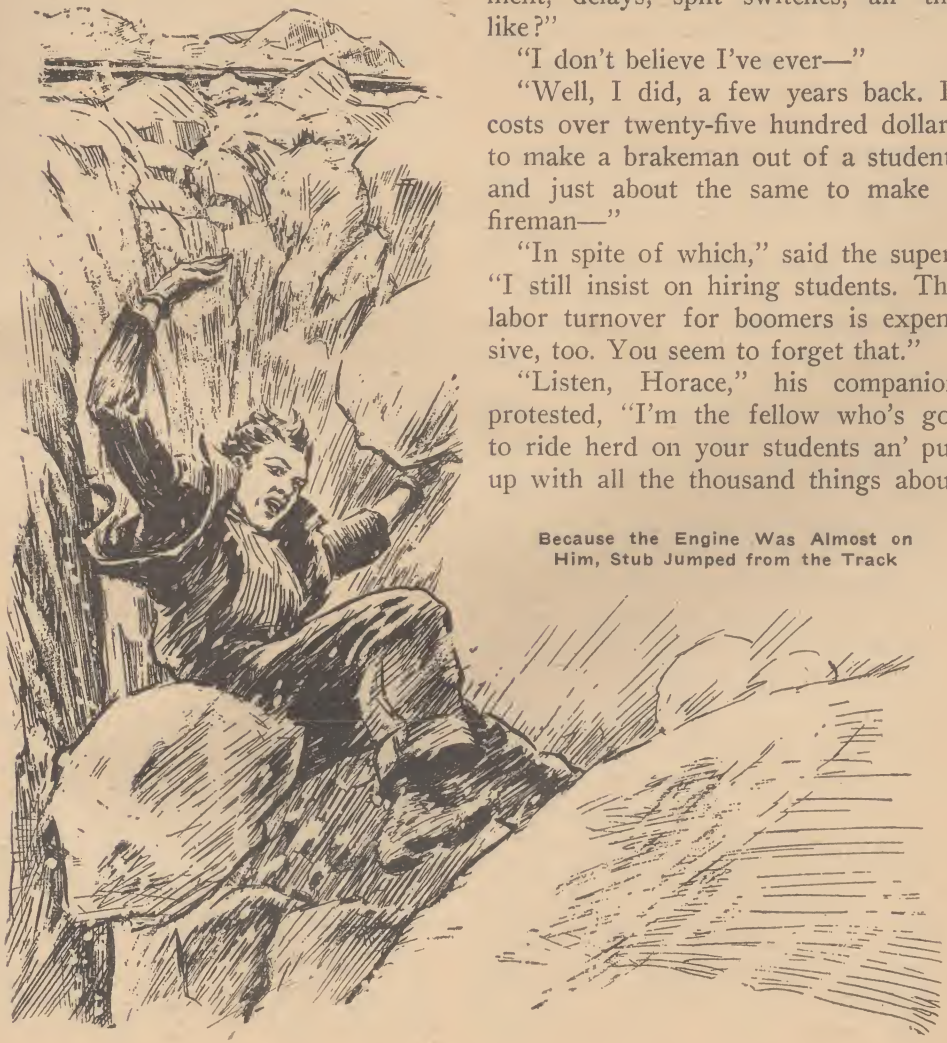
ON one side of a time-scarred desk sat Mr. Horace A. Ridgeley, senior division superintendent of the Narrow Gage & Western, while on the other side sat Big Tom Bennet. Mr. Ridgeley was a home guard, a capable executive. Big Tom was a trainmaster who had come up through the boomer school; he knew mountain railroading, he knew men, and he usually had a lot to say; but this time Ridgeley was doing most of the talking.

It was a crisp fall day in 1916. The hills around Gilson were aflame with crimson and gold foliage, as anyone could see by looking out the superintendent's window. Intercepting the view, however, were stacks belching black smoke, for the town of Gilson had already begun to reflect the wartime boom. New industries were being located along the N.G.&W. and, as Mr. Ridgeley was pointing out to his trainmaster at this very moment, the Fuel Supply Company at Coalton was spending a million and a half dollars on its mine, the local office of which was within range of his vision.

"You see, Tom," he said, "our business on the branch will be doubled—I

might say tripled. It is estimated that two hundred cars of coal will have to be handled over Old Baldy Pass every twenty-four hours." He paused, took a thin cigar from his vest pocket, and bit the end from it. "This will necessitate our hiring more men. According to my records, it's three years since this divison has taken on any new brakemen or firemen."

"That's right," was the reply, "and two hundred cars of coal a day is gonna make this thirty-six inch streak of rust get down an' grunt."



Because the Engine Was Almost on Him, Stub Jumped from the Track

Bennet got to his feet and paced the room, ducking his head each time he passed under the electric light with its reflector. Big Tom was over six feet and built like a wrestler.

"But men will be easy enough to get," he added. "Experienced ones, too."

"Boomers, I suppose?" purred Mr. Ridgeley. "Well, this time we're going to hire green timber."

The T.M. snorted. "Ever figure what it costs to break in a student brakeman—in actual damage to equipment, delays, split switches, an' the like?"

"I don't believe I've ever—"

"Well, I did, a few years back. It costs over twenty-five hundred dollars to make a brakeman out of a student, and just about the same to make a fireman—"

"In spite of which," said the super, "I still insist on hiring students. The labor turnover for boomers is expensive, too. You seem to forget that."

"Listen, Horace," his companion protested, "I'm the fellow who's got to ride herd on your students an' put up with all the thousand things about

railroadin' they don't know. Let me dig up a few boomers to sort of steer the green hands around."

Ridgeley thought a moment. "There may be something in what you say, Tom. Let's put it this way: You can hire *one* boomer brakeman and *one* boomer fireman to each *three* students." He ended brusquely. "That's all."

Big Tom opened the office door, hesitated, and then departed. In the hall outside he mumbled: "Okay, Mr. Ridgeley! But I've still got power to can any brakeman an' get any fireman canned who slips up on himself. Believe me, students are gonna be dam' unpopular on this old narrow-gage railroad!"

THREE crabs, little thirty-ton Baldwin 2-8-0's, blasted slowly up the four per cent grade on the east side of Old Baldy Pass. Between the two locomotives on the head end and the one shoving behind the caboose were eighteen ten-ton coal cars, all of them empty but full tonnage for the power.

Clem Warren, better known as Stub, was back in the coal pit of the head engine, a worn-out number five scoop in his gloveless hands. His face was black as the coal he shoveled down for the fireman, but his heart was singing.

Back at Mears Junction, where a branch from the San Louis Valley connected with the main line of the Third Division, he had talked the bakehead into letting him earn his ride by keeping coal down near the coal boards. In the course of this conversation he had learned that in the very near future a branch line running north of Gilson would start carrying two hundred car loads of coal from the Fuel Supply Mine at Coalton. "And," the fireman had said, "this jerkwater outfit will have to hire plenty of men in engine and train service"—which accounted for Stub's feeling of exultation.

At the end of this tortuous, mile-an-hour grind over the continental divide was Gilson, division point on the N.G.&W.; Gilson, where the offices of super and assistant super were located. Twenty-eight miles to the north was the Fuel Supply Mine. Maybe a railroad job waited him at Gilson.

The bakehead heard his coal-passer whistling when he dropped down to scatter two scoop loads over the grates, and he grinned. This young feller must be taking life joyously, although his pockets were probably empty.

"Feeling good, huh?" shouted the scoop artist above blaring exhausts from diamond stack.

Stub's smile showed a mouth full of even white teeth which glistened in his smudged face. "Yeah, I'm hoping to land a railroad job in Gilson."

"Wish yuh luck, buddy!" The fireman sidled back into the deckless cab.

Twenty-four hours ago Stub Warren had felt as if the whole world were folded up. Behind him was a dearth of jobs, particularly the sort of work he'd dreamed of all his life . . . *railroading*. Stub himself was an orphan. The Middlewest town he'd called home was filled with poverty.

A few years back the railroad running through Petroleum City had been literally swamped with business. Oil wells forming a forest of derricks had poured black gold into an endless stream of tank cars bound for the refineries. Then, in 1915, pipe lines had supplanted the oil tanks. Railroaders with years of seniority packed their belongings and headed "outside."

Stub's father, an oil worker, had been killed when nitro exploded prematurely. The little money he had saved was soon gone. As a kid Stub had spent

most of his leisure time around the maze of Petroleum City railroad yards, where a dozen switch engines worked. Now a single goat handled the entire trackage. Before the pipe line was built, Stub had been promised a railroad job the day he turned twenty-one; but when that day came the railroad itself was completely demoralized.

"Kid," said a kindly super, the same who had promised him the job two years before, "you couldn't buy a job in train or engine service on this pike for all Rockefeller's money."

So Stub Warren had packed his very few longings and, with many a sigh and backward glance, had pulled the pin on Petroleum City.

WHILE these recollections were running through his mind, the three-engine train chuffed up to the water tank at Grey's. When they halted, the engine was spotted at the spout and Stub straightened his cramped back muscles. The fireman grinned at him and said:

"Buddy, will yuh fill the tender while I rake a few clinkers out of my fire?"

Stub nodded vigorously. "I sure will," and he climbed up the coal pile. On top of the manhole cover he reached for the rope on the spout. As his nickname indicated, Stub Warren was not tall. His build had gone more to wide shoulders, barrel breast and firm, well-muscled legs. He raised himself to tiptoe and made a grab for the frayed rope which, months ago, should have been replaced with a longer one.

Just what happened next Stub never was sure of. Either his feet slipped on the metal surface of the manhole cover, or he threw himself off balance when he looked up and reached for the rope at the same time.

In either event, the youth felt himself falling over the rear end of the tender, and tried to catch himself on the edge but missed. Landing on the edge of the narrow platform on the rear of the tender, Stub hit his right leg just above the knee. A stabbing pain jolted a constellation of stars before his eyes even as he rolled downward to the ties and cinders.

The fireman, who had witnessed the fall, raced down to him; but before help arrived Stub was already on his feet again, leaning dizzily against the steambox on the front end of the second engine and giving a wan smile. Deep grime on his face and exposed neck hid his pallor.

"Hurt yourself, buddy?" the bakehead asked anxiously.

Stub shook his head. "Just sort of jolted the wind out of me," he said. "I'll be okay in a minute, and take water for you. Clumsy of me to tumble off like that!"

But those knife-edged pains in his right leg persisted. The youth from Petroleum City gritted his teeth, took a deep breath and climbed back to the manhole on the tender.

Heaving a sigh of relief, the fireman returned to cleaning his fire. Stub managed to get the rope, pull down the spout and fill the tender to overflowing. But every motion of his right leg seemed to intensify his agony. In the coal pit again he sat down, rolled up his overall leg, and carefully felt the throbbing limb. The bone wasn't broken. He was sure of that. Probably just a bruise that would be all cleared up in a day or so.

The engines watered, the train proceeded toward Old Baldy Pass. Thirty minutes later they entered the long snowshed there and the engine Stub had ridden was cut loose from the train.

"We go into Gilson light from here," the bakehead told him. "Yuh won't need to pass any more coal. Might as well ride in with us. Get up on the brakeman's seatbox if yuh want!"

Stub hobbled into the cab, squeezed past the fireman, and dropped his tired frame on a padded box.

"I've got to land a job on this railroad," he gritted once when the engine jerked around a hairpin curve and threw his right leg against the side of the boiler.

Late that afternoon, when they pulled up at Gilson depot, the fireman extended a long lanky finger and said to Stub:

"Super's office is in that long, yeller, frame buildin' across there. Good luck! I'll be seein' yuh."

SUPERINTENDENT RIDGELEY sat at his desk going over the late mail. One letter bore real significance. It read:

> **The Fuel Supply Co. informs this office they will be ready to start shipping 200 cars coal within two weeks. We are instructing dispatchers, master mechanic, and all concerned to concentrate power and empty cars between Coalton and Cleora.**

Cleora was the east end of the N.G.&W. The coal would be transferred to standard-gage cars at that point for shipment to Eastern markets. The letter to Horace Ridgeley was signed by his general superintendent.

The super leaned back in his swivel chair and frowned. Things were going to happen from now on. He wondered if Trainmaster Bennet had started hiring men to help take care of the increased business.

In the office adjoining his, where his chief clerk held sway, Ridgeley heard somebody asking to see the superintendent. Then followed muffled conversation, and a minute later the brass hat found himself looking at a short, well set-up young fellow who gazed fearlessly back at him.

The newcomer had gray-green, wide-apart eyes, a stubby nose, a wide mouth and a rather round face. He was roughly dressed, but clean.

"I'm Clem Warren," he introduced himself. "Everybody calls me Stub. I just arrived from Petroleum City. They told me men were being hired on this narrow-gage railroad."

"We need men, yes; in all departments," said Ridgeley. "Had any experience, Mr. Warren?"

"No, sir. Never worked on a railroad, being too young until recently. But I want more than anything to get a railroad job."

"You look pale as a ghost to me," remarked Ridgeley. "Are you tired?"

Stub tried to grin. "No, sir, not especially. I—you see—I've wanted to be a railroader all my life, and I guess maybe I'm scared you won't give me a chance," he blurted out.

Something about the applicant hit Mr. Horace A. Ridgeley the right way. This kid was muscled for the heaviest kind of railroad work. His eyes were clear and direct.

"What service did you hope to get in?" asked the super.

"I'd like to be a fireman, sir," Stub answered boldly.

The brass hat jerked his receiver from the desk telephone and called a number.

"Roundhouse foreman? . . . Superintendent Ridgeley speaking. I just hired a fireman for you. Name's Clem Warren. Student. I'll send him down. You fix him up with an application. Have him examined by the doc. Let

him fill out a book of rules and make a few student trips. Okay! Good-by!"

He snapped the receiver back on the hook. "Roundhouse is down there," the official explained with a flick of his head. "You'll find the foreman's office. The foreman will fix you out."

"I—gosh, Mister, I can't start to tell yuh what this means to me—" stammered Stub.

"Don't try to," was the curt reply. "We need men. Good-by!"

An hour later Stub left the foreman's office with an order for the company medico to examine him for fireman. His application blank was satisfactorily filled out. In his hip pocket was a book of rules he'd been instructed to study so he could pass the examination—provided he got by the doctor. Of this he had little fear as he entered the medical examiner's office.

The doc was in a cheerful mood. "Don't find many men who can read the bottom line on that eye chart at twenty feet," he remarked. "And not many of them can hear the ticking of this stop watch across the room. You've got a good physique, young fellow. I wish you luck on your new railroad job."

The physician's critical eyes had failed to detect a blemish of any kind on the nude body of Stub. Soon he was dressed again and ready to go to his room where he would study his rule book the rest of the day and into the night.

The following evening the road foreman of engines said to Stub. "You're a full-fledged tallowpot, now, Warren. Mind the rules of the company. *Railroad* every minute you're on duty! From the way things line up now you'll be called to make your first pay trip tomorrow. I'm short a man for the Coalton Branch."

THE super walked into Trainmaster Bennet's office. "Tom," he greeted, "how many boomers have you hired?"

"One so far," said the big T.M. "He's all railroader too. Got a stack of service letters thick as a book. Name's Buck Bradshaw. I'll round up more men this week."

Mr. Ridgeley purred softly: "On second thought, Tom, I've decided to hire all students. That boomer—is he a fireman or brakeman?"

"Brakeman."

"Okay. But no more boomers!"

"You said—" growled the trainmaster.

"I know," Ridgeley agreed. "Since then I've changed my mind. If we can get hold of twenty men like the young fellow I hired as fireman the other day, I'll be well content."

"Student?" asked Bennet.

"Yes. His name is Clem Warren. I think he makes his first pay trip up the Coalton Branch today."

Bennet nodded. "Horace, you're diggin' a pit for plenty of trouble for yourself, an' every train an' engine man on this pike," he growled, and added: "Bradshaw also is makin' his first pay trip to Coalton today. Boomers don't have to make student trips, you know."

He got to his feet, took his hat from a peg and left his office.

"Guess I'll ride to Coalton today, too," he decided.

The day passed, and next morning Big Tom entered Ridgeley's office wearing a grin of satisfaction.

"Looked over the delay reports of the Coalton Branch for yesterday, Horace?" he asked jovially.

"Not yet," said the super. "Why?"

"Well, there's thirty minutes delay marked up to your student fireman when he fainted on the job."

"Fainted?"

"Yeah. Probably couldn't stand the high altitude. It's low in Petroleum City, where he came from."

Mr. Ridgeley reached for his telephone and called the company doctor.

"I want some information on the physical condition of Clem Warren," he said. "A man you examined for fireman a few days ago." A pause. Then: "Thank you, doctor."

He snapped the receiver back on the hook and turned to Bennet.

"The doctor says Warren is sound as a dollar. The condition of his heart, blood pressure, lungs, every part of him are above the average." A frown passed across Ridgeley's face. "Still, it is peculiar he'd keel over, Tom, as you say. Perhaps the kid is starving himself."

"I don't think so," returned the T.M. "Starvin' people show it in their faces."

The super nodded.

"Nope," Big Tom went on. "I've railroaded too long not to know students. As a rule, they just can't take it. Now, as I've often said, experienced heads will keep traffic rollin' smooth as oil. Students gum up the detail until it's a tangled mess."

This reopened the old argument. Horace Ridgeley wound up by saying with an air of finality:

"I'm still determined to make the necessary narrow-gage men out of green timber."

"An' it's gonna cost plenty," said Big Tom as he stalked out.

THE N.G.&W. was piling empty cars into Coalton as rapidly as possible. Storage tracks there were lengthened. The spurs for empties above the old mine had been gouged from the mountain an additional three quarters of a mile. The Fuel Supply Company had electrified their mine, enlarged the tipple and added many additional miners to their payroll.

Winter comes early to this high country. The end of October found the younger generation in Gilson skating on firm, glistening ice. The first two days of November found dollar-sized flakes of snow sifting down from a leaden sky, and when the sun finally broke through the cloud banks the white landscape was blanketed with three feet of snow.

"Things are gonna get good from now on," Stub's engineer prophesied.

Stub looked a question.

"Thuh weather will be twenty, thirty below zero," the hogger amplified. "Everything will freeze up. Thuh wind will blow cuts full uh snow an' we'll have tuh buck it out."

Stub glowed inside. Snow-bucking brought a thrill of anticipation to him. He'd heard how these mountain rails put their engines into ten-foot drifts as fast as they could turn a wheel, how they didn't know whether wheels were on rails or ice-covered ties. He'd seen the rotary plow sitting on No. 10 stall in the roundhouse and hoped that some day he'd have a chance to fire her.

Then there was the little *272* sitting on No. 9 stall. During the storm machinists had bolted an ungainly wedge plow to her snout after removing the pilot. The wings of this rose higher than the cab and the headlight had to be elevated to shine above it.

The night of the third was thirty-two below zero. A sun which peeped over the continental divide to the east was as cold as the ice hanging from the eaves of the hotel. Stub was called for the Coalton Branch that morning. By the time he reached the roundhouse his ears were almost frozen and the tip of his nose ached.

Buck Bradshaw, the boomer shack, came walking toward them just as Stub finished building up his fire. Buck was dressed for the weather, body encased in a heavy sheepskin coat pulled up around his ears, a heavy wool cap and new overshoes. He did not speak to either man in the cab, but climbed aboard and stood in the left front side until they were out on the main. Then he dropped off and coupled the 402 on the head end of twenty-five empties. Tonnage had been reduced to compensate for frozen journal boxes.

The gangway was almost as cold as outside. Steam whisped through it, and the fire looked red instead of white when Stub opened the door. By this time the youth from Petroleum City had learned the places where he could get up and ride the cab. He was well chilled when they hit Almont sag.

Coalton was buried under almost five feet of snow. Section gangs were working around switch stands, shoveling holes so brakemen could throw the rails over. The switch crew had flanged the yards and the mine tracks.

Buck cut them off and caught the rear of the tender to let the 402 around the wye. Watching him, the engineer called across to Stub: "That shack's thuh laziest man I ever seen."

Stub nodded agreement. He'd come to the same conclusion several days ago. Any of the regular narrow-gage men would have helped the fireman. But this particular boomer knew he couldn't be forced to do any work not listed in the trainmen's schedule.

THEIR helper ran light ahead of the train. The 402 coupled into the thirty-five loads of coal, the air was tested, a third of the retainers on the head end of the train were turned up, and the engineer whistled off.

Three times they had to take the slack on the frozen loads before the 402 and the switch engine broke them loose. When they finally hit the grade leading to Gilson the engineer shut off his throttle. Stub put a slug of coal into the firebox and pulled his tired, aching frame up on his seat.

"Got your heater workin'?" the engineer called across the boiler top.

Stub flushed guiltily. He shook his head, then stooped so he could close the frost valve and open the steam on his non-lifter injector, thus causing live steam to blow back into the tender.

"Is your hose frozen yet?" shouted the hogger after Stub had straightened up.

The youth got off his seat, backed into the gangway and knelt so he could reach down and feel for the thump on rubber hose which would tell him steam was going back into the water. The hose was throbbing and warm to the touch.

"It's all right," Stub yelled and sat down on his seat again.

They passed the station of Almont at four P.M. On the other side was the sag; it was necessary for engineers to work a full throttle through this sag and the mile-long Almont Canyon beyond.

The runner pulled out his throttle. His brake valve was in full release. Soggy exhausts gave way to clear ones. Stub climbed down and put in a fire. Back in the cab he looked at the water glass. The water level was between first and second gage cocks. His safety valves opened with a roar which was harsh against the below-zero air. The engineer reached forward to prime his injector before putting it out.

A dozen times the hoghead tried to prime. Finally he screwed down his frost valve to blow the steam back in

case any cinders had clogged the feed-hose strainer. Then he opened his frost valve and again tried to prime the injector. The water level in the boiler steadily lowered. Their speed had slowed to a scant ten miles an hour.

In desperation he called across to Stub: "Put on your non-lifter! My injector don't seem to take up thuh water."

Stub bent over, opened the frost valve, and tried to get the non-lifter to prime. He had no better luck than the engineer.

By this time the latter was on his feet, forehead showing beads of perspiration. His left hand was on the bottom gage cock, repeatedly trying it. "Does it work?" he cried impatiently time after time, but each time Stub was forced to shake his head.

Then the engineer left his side and crossed the gangway. He tried to get the non-lifter to pick up water, but it stubbornly refused. With a grunt of anger he backed from the cab. His hand came up against the water leg of the tender for support. His expression changed as he hastily jerked his hand away.

"Hell!" Stub heard him exclaim. Back on his own side, the runner closed his throttle and while they drifted to a halt he called across to the bakehead: "Knock your fire, quick!"

"What's the matter?" asked Stub anxiously.

"Yuh worked your heater so hard thuh water's boilin' in thuh tender. These injectors won't pick up boilin' water."

The hogger helped Stub to kill the fire. Together they opened the ashpans and then shook every red coal through the grates. Back in the cab, the engineer hollered over to the brakeman: "Go tell thuh conductor I had to kill this engine. Tell him tuh walk back tuh Almont an' phone for another engine tuh come up an' get us."

Buck Bradshaw mumbled to himself, but grudgingly complied.

It was two hours before a locomotive came backing up the line toward them. There was enough steam left on the boiler of the 402 to work the heaters and enough heat so the feed pipes would not freeze. The other engine coupled in.

Buck, with many curses under his breath and more lurid ones when he was off the engine, plowed back and cut the train in the center. The other tea kettle took the slack a dozen times, but all journal boxes had frozen and she was unable to budge them. Finally, after repeated trials with less cars each time, she was able to drag the 402 and ten loads of coal.

As there were no sidings between there and Gilson that would hold ten cars and a locomotive, they were forced to take the entire outfit to Gilson. The 402 was shoved on the roundhouse track and left with her crew, while Buck took the other engine and returned for the balance of the train.

THE following morning revealed snow flying through the air, a leaden sky overhead again, and a ten-below-zero wind which whistled around the hotel, rattling doors and windows. Trainmaster Bennet was closeted with Superintendent Ridgeley. Big Tom was doing most of the talking this time, and in a confident tone, basing his argumentation on the delay report made out by the conductor of the stalled coal train of the night before.

"You see, Horace," he was saying, "that one bonehead pulled by your student cost us plenty. There was eight hours overtime, at time an' a half, for

the train crew; an' a second engine crew that made a day an' four hours overtime, besides the cost of runnin' the second engine."

"I can see that," said the super.

The T.M. went on: "Well, now, I got about thirty applications from native fellers, all of 'em green as grass about railroadin'. If you still want green timber, I'll go ahead an' hire it. But if you want experienced men—"

Ridgeley cut in coldly: "Experienced men who will quit any time they feel like it, who have no real interest in this narrow-gage railroad except a hundred dollar stake—"

"But who'll railroad while they're on the job," finished Big Tom, who used to be a boomer himself and knew the breed. "Sure, boomers are temperamental. I seen forty-seven boomer firemen walk off the job in Helper, Utah, a few years back. Forty-six of 'em had no intention of pullin' the pin. The other one had decided to haul stakes, and met the forty-six while on his way for his time and a letter. They all went out an' tied up the hill tight as a drum. But in time we had forty-seven more men to fill their places."

"That's exactly the trouble, Tom. These students cost money to teach, but they stick after they learn the game. They make dependable men because they need their jobs. They'll go out in any kind of weather, buck any kind of conditions. Your boomer, on the other hand will poke his nose out the door when called. If the weather doesn't smell good, he quits right there."

"Well, Horace, shall we give jobs to this forest of green timber? Or shall we fill the ranks with experienced men?" the T.M. asked bluntly.

Mr. Ridgeley was worried and chewed rapidly at his cigar. Finally he said: "I'm unconvinced, Tom. My original ideas regarding students will have to stand."

Big Tom grinned. "An' how about that fireman, Stub Warren, who messed up the detail last P.M.? It's his second offense."

"So long as we're up against it for men," snapped the super, "we'll have to hang on to him, I suppose. But if he pulls another stunt on the N.G.&W., he's done."

The chief dispatcher entered and interrupted them. "Coalton just called in," he announced. "Says it will be impossible to keep the mines running until the rotary plow can get there and bore out the loading tracks. Wind blowing a hurricane. I expect the track this side of Coalton is blown full, too."

"Did you order the rotary?" asked Ridgeley.

The dispatcher answered: "I'm not taking chances on a five-hundred-dollar bill to the company without first consulting you."

"Wouldn't the wedge plow be able to knock out those drifts?" Big Tom put in.

"It might," said the dispatcher. "Trying would be cheaper, probably."

"Then order the wedge plow, flanger and a train crew," Ridgeley decided. "If they don't do any good, we'll use the rotary. If the wedge plow gets through, have them bring back all billed loads."

STUB was not called for the wedge-plow engine, another turn standing ahead of his. Instead, he spent the forenoon wondering why he wasn't called. Perhaps they had fired him.

At length, unable to stand the suspense any longer, he headed through the blizzard toward the roundhouse. He entered the office of road foreman of engines, just in time to be greeted with:

"You're called to fire the rotary. She's ordered for one-thirty P.M. Coalton branch blowed full. We run the wedge plow this A.M. Wedge got through but wired it was impossible to get back without the rotary plow ahead of 'em. I'm putting four engines shoving behind th' rotary."

Stub glowed inside. Then he hadn't been fired after all; they were giving him another chance! This time he'd make good if human brain and brawn could make good on the narrow-gage.

The coal pit on the rotary was roofed over, as was the space between firebox and tender. Canvas storm curtains protected both sides. The rotary had a firebox five feet by nine. This worried Stub. The 402 had one two feet by eight. Naturally the rotary would burn her coal differently.

The rotary crew was composed of a pilot who was an experienced engineer, a regular hogger to handle the wheel, and a fireman. The pilot rode the pilot-house, which set above the wheel and was connected with the rotary engineer's position by a bell signal. The wheel man, in his turn, communicated with pilot and pusher engines by whistled signals.

With four engines coupled behind them, the outfit clanked to the main, rotary wheel revolving slowly. The wheel was never halted, because if it was, it would promptly freeze.

Bradshaw was braking in the rear. The train crew was an extra or "made-up" one. No caboose being available, they were using a day coach, which was better, as some twenty section men would be taken along to clean the ice from frogs and rails and to shovel snow if necessary.

They were almost ready to depart when Ridgeley and Big Tom came hurrying to the coach and climbed aboard. Then the outfit whistled off and headed slowly up the Coalton Branch. The pilot was unable to see over twenty feet ahead, owing to the blowing snow.

Stub soon discovered it was cold in the gangway on the rotary, even with the boiler-head at his side and the heat from the door which he was forced to keep swinging.

The big wheel chewed away on a half throttle, snow pluming out the left side of the hood. Their speed was not great. And it was not until they came to the slate cuts that the snow became heavy and deep enough to cause the rotary engineer to open his throttle wide. The entire train vibrated from the motion of the wheel, tremors running back to the coach.

Stub was firing almost mechanically when they came out of the slate cuts and nosed into a deep cut which was blown level full. He was balanced, legs spread wide apart, throwing scoop after scoop into the firebox, swinging the door between each one. He had closed the door and was reaching for another scoop, when suddenly everything went black. He pitched forward in a huddled heap. . . .

THE rotary engineer was working his wheel with a full throttle, his reverse lever shoved to the front corner. He was watching his water level, the steam gage. When the pilot whistled for increased speed on the wheel, the hoghead looked up at the gage and smothered an oath. The pressure had dropped from 145 back to 100 and was still dropping. He took a step back between the boiler and the side of rotary housing, and leaned out so he could see his fireman. Then with a grunt he went back inside and pulled a single blast on his whistle. Before the outfit clanked to a halt, the engineer had eased off on

his throttle and was in the gangway, bending over his prostrate fireman.

The pilot came back to learn the cause of the stop. He wet his handkerchief with water and began rubbing Stub's chalky face. Just as the youth opened his dazed eyes, Ridgeley and Bennet pulled themselves into the rotary.

"What's the matter?" asked the super.

"This fireman—I found him layin' here when thuh steam started droppin'," came the answer. "I dunno what hit him."

Stub struggled to rise, only to slump back. His right leg seemed to be rubber. "I'll be okay in a minute—" he gasped.

"He pulled the same stunt first pay trip he made," Big Tom recalled.

"There's something wrong with this man," said Mr. Ridgeley, and the T.M. indicated agreement.

Stub tried to get to his feet. His leg still refused to hold his weight.

"We can't stand here all day!" Ridgeley exclaimed. "Get this man back to the coach," gesturing toward Stub, "and I'll see if I can get somebody to fire the rotary from here."

"I'll take her," offered the head brakeman.

"Thanks," said Ridgeley. "The company will appreciate it."

Stub was picked up and carried through the deep snow to the coach, where he was given a seat. Again he tried to get to his feet, but with no better results. He sensed now that he was washed up, finished on the narrow-gage. The brass hats would not overlook this third stunt.

TWENTY minutes later the rotary steam pressure was back to maximum. The outfit moved forward. Buck Bradshaw, who had been flagging, came into the coach rubbing his ears.

Ridgeley caught the coach as it pulled past, and he entered and seated himself facing Stub. His features were frozen in harsh lines, his gray eyes cold.

"This is the second time you've fainted while on duty," he purred.

Stub nodded miserably.

"And yesterday you caused a grave delay when you worked your heater until the water in the tender boiled," the super went on.

"I know—"

"Of course, I'm forced to pull you out of service. On your arrival in Gilson you'll turn in all company property in your possession. I'll have the time-keeper wire for your check."

"I tried to make good on this job," said Stub in a voice that trembled.

"I know. Perhaps this altitude is too high for you," suggested Mr. Ridgeley more kindly.

"It isn't the climate," blurted Stub.

The official frowned.

Stub rushed on, now that he had determined to lay the whole thing before the super. He related how he had fallen from the tender while taking water for the fireman the day he bummed his way into Gilson. He told about the pain in his leg, how he'd steeled himself to not limp when applying for the job.

"I needed work badly," he ended. "I was afraid if I told the company doctor about my leg he'd turn me down. I hoped it'd get well, but it seems to grow worse."

"That only makes your position the more embarrassing," said Mr. Ridgeley. "You hired out here under a misrepresentation. You led the doctor to believe you were sound in body, mind and limb, when you were not."

"An' I'm fired?" whispered Stub.

Mr. Ridgeley nodded his head. Then he arose and walked back where he joined Big Tom Bennet.

A dozen times during the balance of the run to Coalton, Stub Warren tried to get to his feet. But the right leg was still limp as a dishrag. By this time he was genuinely distressed. Would he be a cripple for life? He had no job and little money. No doctor would be interested in his case, broke as he was.

At Coalton they found the wedge-plow engine coupled to thirty loads of coal, the switch engine nosed against the caboose on the rear ready to shove them out of the yards. Superintendent Ridgeley concluded that the rotary had better turn and go down the branch ahead of the coal train because of the way the blizzard still raged.

The wedge-plow engine had cleaned out the tracks in the yards, so the rotary was saved this task. By this time night had fallen. Lanterns ten feet away looked hazy and at twenty feet they were barely discernible. Added to that, the temperature had dropped even lower. The snow-laden wind sobbed and whined down from above timberline peaks, carrying on its crest the extreme chill of the stark masses of granite.

Stub still half sat, half reclined in the double seat. His leg had stopped aching now and was utterly dead to the touch. He tried rubbing, but it did no good. The injured limb still refused to bear his weight.

THEY nosed slowly around the lower leg of the wye. Once more Mr. Ridgeley came forward and again sat down facing Stub.

"How does your leg feel by now?"

The ex-fireman's face was chalky. "It don't seem to hold up my weight," he said.

"You've tried to stand on it?"

A nod. "Yes."

"I'd consult a doctor immediately on arrival in Gilson," suggested the official.

Stub smiled mirthlessly, but said nothing.

Behind, Stub heard the trainmaster telling Buck Bradshaw: "That coal train will be hot on our heels. If anything goes wrong with us, you'd better get back and flag 'em."

"I'm hopin' nothin' goes wrong with us," the brakeman responded. "I ain't stuck on facin' the blizzard outside. An' that coal train will be thirty minutes breakin' them loads loose, froze an' half snowed in as they are."

"No use takin' chances," said Bennet.

They jogged along at a fifteen-mile clip, passed the water box, and nosed into the slate cuts. Suddenly the brakes under the coach clapped against wheels and, with chattering and grinding, the outfit jerked to a halt.

One long and three shorts sounded from the rotary; then three long whistles followed by three shorts. The first was a call for the flagman to go back and protect the rear of train. The second was for the section men to come over to the rotary.

Bradshaw grudgingly picked up his red lantern, a couple of fusees, and his white lantern, and let himself out the back door. The section men reluctantly pulled on heavy mackinaws and sheepskins, took their shovels and picks and, followed by Bennet and Ridgeley, went out the front door.

Stub tried to get to his feet, only to sink back. The rear door opened a crack and Buck Bradshaw cautiously

looked into the coach. Seeing it was deserted save for Stub, he entered and moved toward the stove.

The wounded man looked at him incredulously. It was almost impossible to believe the shack had deliberately ignored his flagging. The following coal train would not see the rear end of the rotary until they were almost on it. Section men would probably be working under the rotary. . . .

Stub twisted his body and pulled himself half erect by the back of the seat. His eyes burned. Prickles of fear ran up and down his spine.

"That coal train followin' us," he croaked. "Aren't you goin' to flag it?"

Buck sneered. "That coal train, feller, won't be along here for forty minutes. I know my railroadin.' An' what in hell do you care, anyhow? Yuh're fired!"

Stub could only gaze at the man in horror. If this was railroading, then all the romance and red-blooded adventure he'd imagined about it was only a myth.

"I ain't gonna stand out there an' freeze," Buck grumbled. "I put down a gun anyhow," he went on as though trying to justify himself.

"You couldn't have put it down far enough back to let the next train stop before they hit us," Stub cried. "You weren't gone long enough."

"Aw, lay down an' faint some more!" Bradshaw snarled, turning back to the stove.

STUB was gasping now. That approaching extra, the section men, the engine men on those four engines. . . . If the coal train were running tonight as Stub's engineer had let them run through the slate cuts, they'd be bowling along at twenty or twenty-five miles per hour. There was tonnage in those loads of coal.

Suddenly the fear left Stub Warren and gave way to white-hot anger, which coursed through every fibre of his body. The air in the coach seemed to turn to blood. Through it he could see the sneering face of Buck Bradshaw, could see the man rubbing his hands in the heat from the stove. Overhead, oil lights threw deep shadows in the aisle.

All at once Stub found himself standing erect, resting most of his weight on his right leg! He found himself walking slowly toward the brakeman. Bradshaw saw him advancing and paled. Stub's face was set, his eyes pin-points of flame, his arms dangling loosely at his sides.

"Go back!" Buck snarled.

Still the fireman advanced as though walking in a trance.

"Back, I tell yuh!" yelled Buck, snatching up his white lantern and throwing it straight at Stub. The youth moved his head and shoulders and the lantern hissed past him, crashing against the end of an arm rest.

Stub leaped within two feet of the brakeman. His right fist came up, thudded glancing from Buck's cheek. With a bellow of rage the brakeman began raining blows on Stub's face, his body.

The youth from Petroleum City did not *take* all the blows. He delivered punches which cut and slashed, but failed to land on a vital point.

Panting like enraged animals, the pair fought in the narrow confines of the aisle. Minutes sped, with only the sound of grunts and blows to break their silence.

Buck knocked Stub to his knee. Although growing weak from the great

exertion and groggy from the blows he'd taken, Stub was able to regain his feet. Through a red haze he saw the horse face of his foe, and put every ounce of his remaining strength into the blow toward the hard chin. The blow landed. Bradshaw weaved on his feet, a blank look spreading over his face, and he fell.

The ex-fireman did not hesitate. Stooping, he grabbed up the red lantern and a single red fusee. Then he was out the back door and stumbling up the snow-filled track.

Across the river below the slate cuts he saw the orange reflection of an oil headlight and he heard the rumble of an approaching train. Stub raised his red lantern. A fierce gust of wind came, and the lantern was only a useless object in his hands. He flung it away.

With fingers which seemed to be all thumbs, the youth tore the end from the fusee. Still stumbling and half running, he hurried toward the approaching extra. He drew the end from the fusee across the inflammable part. It glowed to a thin stream of red flame which grew until it painted the snow-covered mountain side.

Then the oil headlight on the approaching coal leaped into view through the storm. Stub waved the blazing fusee across the rails.

Who-o-o who-o-o," came the most welcome sound he had ever heard. The engineer had seen him. Fire began to fly from the brake-shoes back along the train, and Stub knew the hoghead had applied his emergency. Then because the locomotive was almost on him, Stub jumped.

He slipped in the snow, fought to retain his balance and as the engine rumbled past him, wheels fighting in reverse on two streams of sand, he went over backward. It seemed that the whole world was giving away under him.

The youth felt himself somersaulting over and over. Snow filled his eyes, his ears, his mouth. His head smashed against a boulder.

SOME time later it penetrated through Stub's unconsciousness that he was being moved. Still later he smelled a pungent, acrid odor.

It was not until he opened his eyes in the company doctor's office, to a bright sun-filled morning, that he became aware of his surroundings again.

"Take it easy, boy!" soothed the medico. "I've just made a thorough examination. That fall which Mr. Ridgeley tells me you had from an engine tender bruised the nerve of your right leg—sort of knotted it, you might say. I've taken care of that all right. In a week or so you'll be back to work, firing an engine, good as new."

Stub Warren closed his eyes while he tried to grasp the news: "Back to work . . . firing an engine . . . good as new!"

At length he found his voice. "That's great, Doc! Wait'll I tell Buck Bradshaw—"

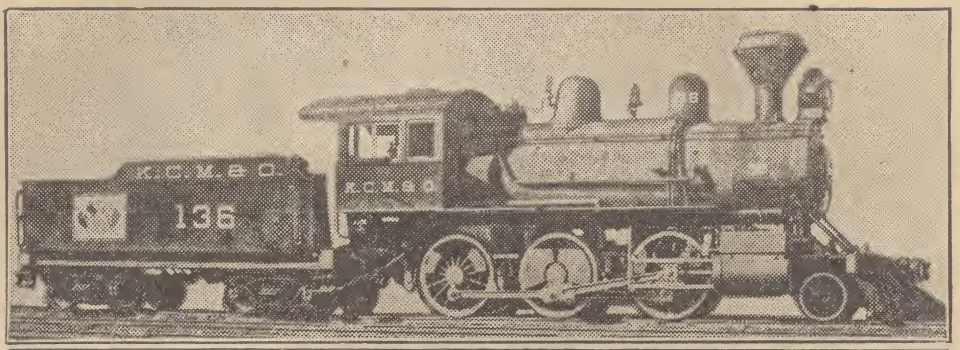
The medical man chuckled. "Sorry, there are several people who'd like to say things to Buck Bradshaw, but nobody knows where he is. Probably down in Arizona by now. That man wasn't a fair test of a boomer."

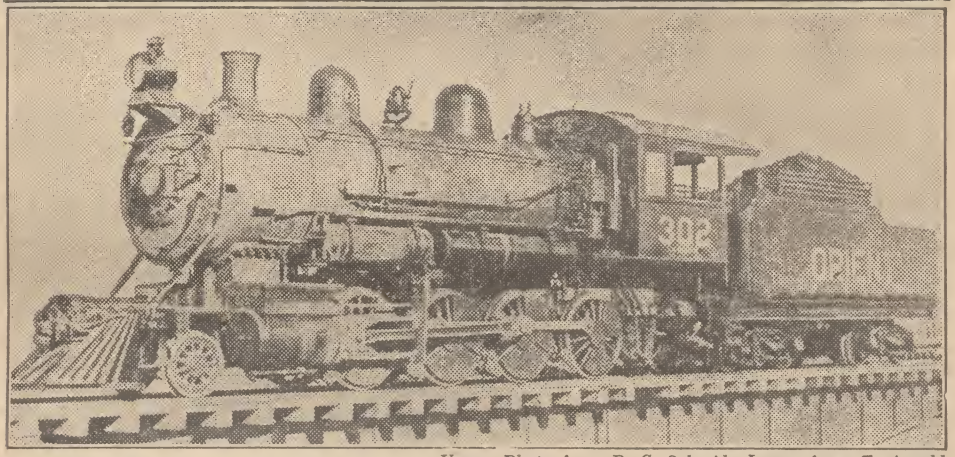
"No, he wasn't," Stub agreed.

"Mr. Ridgeley left word to tell you that he's going to make a narrow-gage fireman out of you," the doctor announced, "even if it costs the company a fortune. And half the men he hires hereafter will be boomers who'll help to make rails out of the green timber."

Locomotives of the Santa Fe System

(Specifications of 4-4-0, 4-6-0, 4-4-2, and 4-6-2 types were taken up last month.)

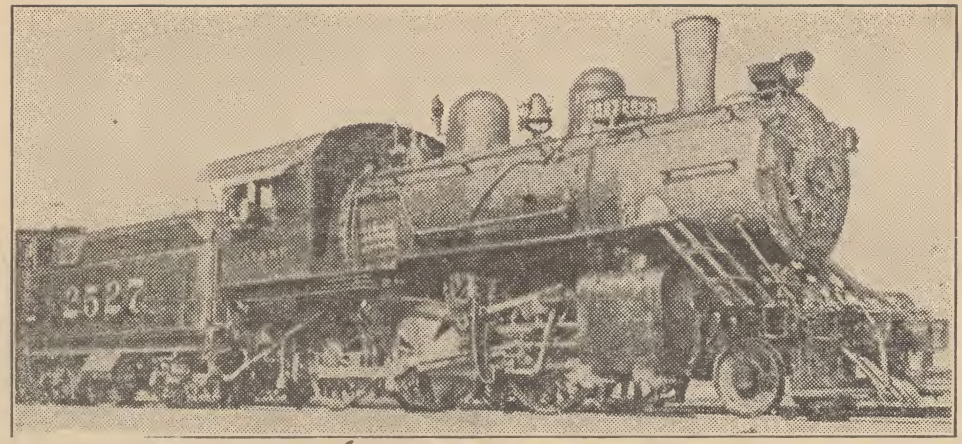




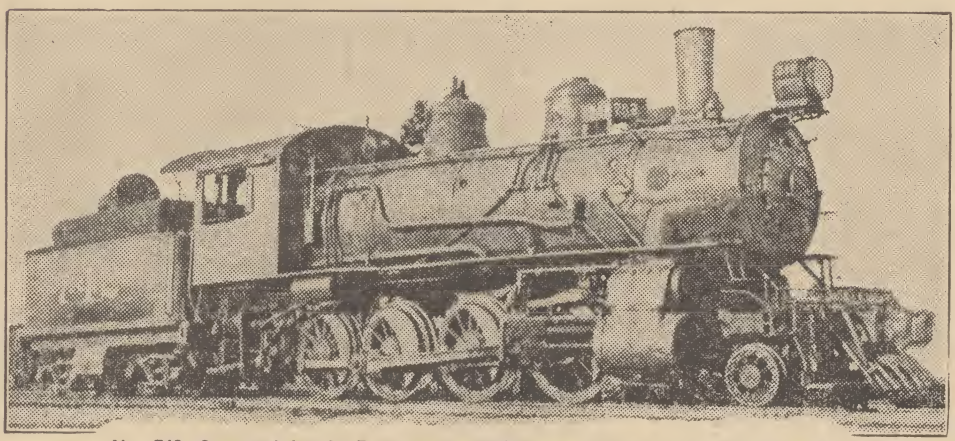
Upper Photo from R. C. Schmid; Lower from T. Arnold

After the Santa Fe Took over the Old Kansas City, Mexico & Orient (Projected from Kansas City to Topolobampo, Mexico), No. 136 (Upper) Became Santa Fe No. 2531, and No. 302 Became Santa Fe No. 2553. Both Originally Equipped with Allfree-Hubbell Cylinders, Using an Exceptionally Long Stroke

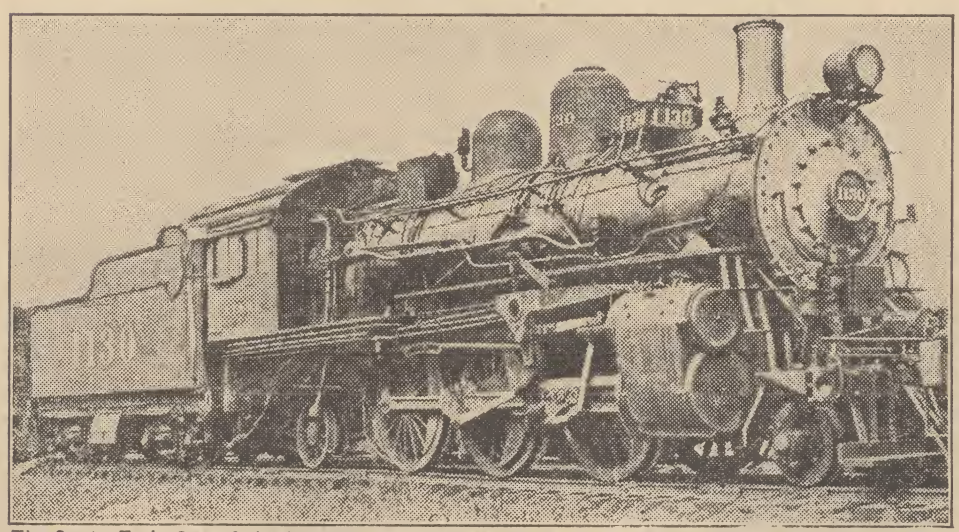
Class	Numbers	Cylinders Dimensions (Inches)	Driver Diameters (Inches)	Working Pressure (Pounds)	Weight of Engine Alone	Tractive Force (Pounds)	Builder & Date
2-6-0 (Mogul) Type							
2526	2526-2528, 2530-2534	21¼x28	63	200	168,000	34,100	Alco, 1907
(No. 2531 has 57-inch drivers, exerts 37,700 lbs. t.f.; all these were originally Kansas City, Mexico & Orient Nos. 130, 132, 133, 135, 136, 144, 154, 155 respectively.)							
2-6-2 (Prairie) Type							
564]	564, 565	22½x28	63	200	214,500	38,250	Schenectady, 1902
		(Originally tandem compound engines)					
1000	1000-1013	23½x28	69	200	237,300	38,150	Baldwin, 1901
1014	1014-1038	23½x28	69	200	235,200	38,150	Baldwin, 1901
1050	1050-1124, 1126-1152	23½x28	69	200	235,200	38,150	Baldwin, 1902, 03
	(The 1000, 1014, 1050 classes were originally Vauclain compounds.)						
1207	1207, 1210, 1214, 1215	23½x28	69	225	272,900	42,900	Baldwin, 1903
	(These engines rebuilt from Pacific types of same numbers.)						
1800]	1800-1871, 1873-1887	25x28	69	200	279,000	43,200	Baldwin, 1906, 07
(Nos. 1800-1802, 1804-1811, 1813, 1815-1817, 1822, 1831, 1840, 1841, 1834, 1838, 1847, 1868, 1869, 1866, 1848, 1856 weigh 272,400 lbs. Engines below 1834 built in 1906. All engines of 1800 class were originally balanced compounds. See photo of No. 1812.)							
2-10-0 (Decapod) Type							
988	988,989	26x34	57	180	263,600	61,740	Schenectady, 1902
	No. 988 built in 1901; all were originally tandem compound.)						
2565]	2565-2569	25x30	57	215	253,750	60,000	Baldwin, 1925
	(These were originally Kansas City, Mexico & Orient Nos. 801-805.)						



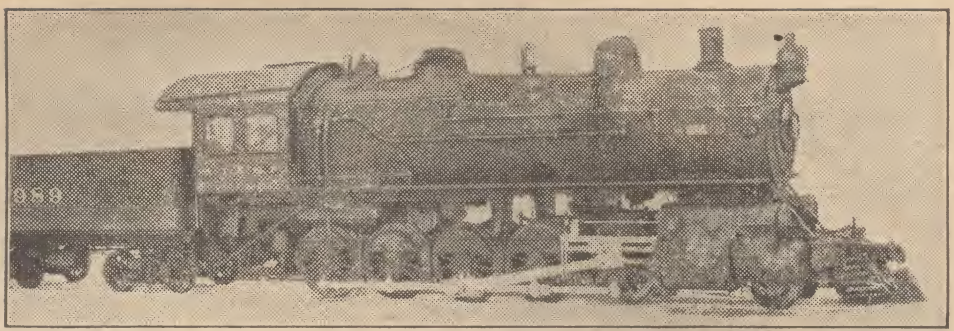
No. 2527, Originally No. 132 of the K. C. M. & O., Photographed at Waynoka, Okla., by W. O. Gibson, Topeka, Kan.

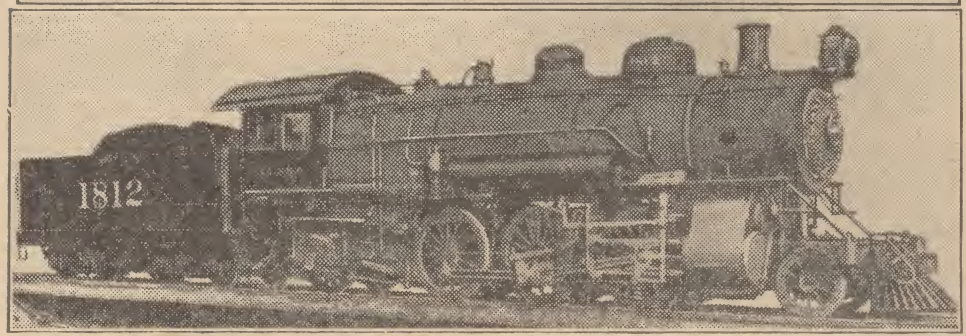


No. 742, Snapped by S. R. Wood of Stillwater, Okla., at Cushing, Okla.



The Santa Fe is One of the Few Roads Still Operating a Large Number of 2-6-2's. Here Is No. 1130, Taken at Chicago by H. Miller, 852 Lincoln Ave., Palo Alto, Calif.



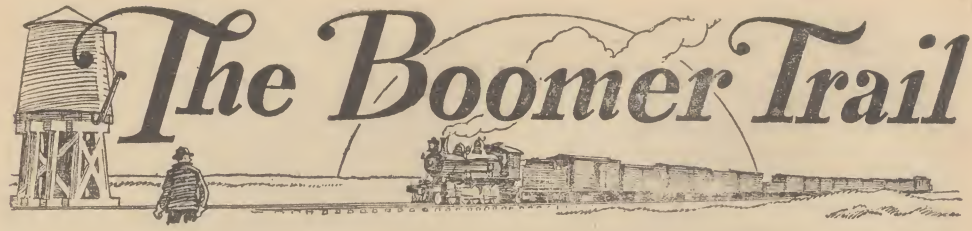


Upper: No. 989 as She Looked When Built at Schenectady; Lower: No. 1812, Taken After Completion by Baldwin

2-8-0 (Consolidation) Type

640	641, 643	20¾x28	57	180	160,500	32,400	AT&SF, 1897
(4) 664	653-655, 658, 662 664-666, 671, 672, 676, 678, 682-684, 690, 695, 697, 701-703, 705, 706	20¾x28 20¾x28	57 57	180 180	161,500 161,500	32,400 32,400	AT&SF, 1898 Baldwin, 1898, 99
709	709, 718-723, 725, 727-728	20¾x28	57	180	161,500	32,400	Dickson, 1898, 99
	(These engines acquired from the Santa Fe Pacific.)						
729	733-735, 740-746, 751, 755, 756, 758	21x30	57	180	180,800	35,500	Baldwin, 1900
759	759-768	21x30	57	200	173,080	39,500	Baldwin, 1900
769	769, 771, 772, 784, 774-782, 786, 788	21x30	57	195	179,300	38,500	Richmond, 1900
	(These engines acquired from Santa Fe Pacific.)						
789	789-791, 794-796, 798, 804, 806, 807, 811-816, 821	23x32	57	180	203,115	45,500	Baldwin, 1901, 02
789	792, 793, 799, 818	23½x32	57	170	203,115	44,800	Baldwin, 1901, 02
789	800	23x32	57	180	203,115	45,500	Baldwin, 1902
789	805, 808, 809	23x32	57	200	203,115	50,600	Baldwin, 1902
789	802	23½x32	57	180	203,115	47,500	Baldwin, 1902
789	801, 810	23½x32	57	190	203,115	50,200	Baldwin, 1902
789	817, 819, 820, 823	24x32	57	170	203,115	46,800	Baldwin, 1902
	(All 789 class engines were originally Vauclain compounds.)						
824	824	24x32	57	170	214,600	46,800	Baldwin, 1901
	(Originally Vauclain compound, with Vanderbilt firebox.)						
825	827, 829, 832, 840, 846, 849	23x32	57	180	211,605	45,500	Rhode Island 1902
825	850	23x32	57	190	222,800	48,000	Pittsburgh, 1902
825	856	23x32	57	180	211,605	45,500	Pittsburgh, 1902
	(All 825 class engines were originally tandem compound.)						
870	870-874	21x30	57	200	180,800	39,500	Baldwin, 1905, 06
	(Formerly Rocky Mountain & Santa Fe Nos. 101-105.)						
990	{990, 991	21x32	57	200	195,400	42,000	AT&SF, 1901
	{992-999	21x32	57	200	187,420	42,000	AT&SF, 1901
1900	1900-1919	23½x32	57	200	243,500	52,800	Baldwin, 1912, 13
1950	1950-1958, 1960-1991	23½x32	57	200	232,000	52,800	Baldwin, 1907, 08
2439	2439-2441	19x26	50	180	147,200	28,800	Brooks, 1904
2442	2442-2444	19x26	50	180	151,100	28,800	Brooks, 1905
	(Classes 2439 and 2442 were formerly Santa Fe, Prescott & Phoenix Nos. 51-56.)						
2506	2506	23x30	51	180	226,700	47,650	Alco, 1903
	(Formerly Kansas City, Mexico & Orient No. 23.)						
2507	2507-2525	23½x32	63	200	239,000	47,700	Alco, 1907-10
	(Formerly KCM&O Nos. 51-69.)						
2535	2537-2540, 2542, 2546, 2548, 2549	23x30	55	205	223,000	50,200	Alco, 1909, 10
	(Formerly KCM&O Nos. 202-206, 208, 212, 214, 215.)						
2535	2536, 2541, 2547, 2543-2545	22x30	55	200	212,500	44,900	Alco, 1910
	(Formerly KCM&O Nos. 207, 213, 209-211.)						
2550	2550, 2551	23x30	57	200	206,000	43,300	Cooke 1906
	(Formerly KCM&O Nos. 251, 252.)						
2552	2552, 2553	22x30	57	200	222,000	43,300	Cooke, 1905
	(Formerly KCM&O Nos. 301, 302.)						

Continued Next Month



I WAS hired on the Burro Railroad in Nogales, Ariz., and shipped to Benson as a hostler. Benson is about 18 miles from Tombstone, and when the latter was a rip-roaring hot town with the mines working, the Burro Railroad did a land office business. But after the price of silver dropped, the mines at Tombstone shut down and things became slow, with about one train a week.

The company had a long rambling roundhouse with 13 stalls; also a coal deck, a freight house and a depot, all at Tombstone; so a hostler was stationed at Benson more for the purpose of protecting the company's interests in case of fire than for any other duties. In the event of fire the owner of an unoccupied building cannot collect insurance.

One night a work train arrived with a pile-driving engine mounted upon a flat car, and the division foreman said to me: "Now, Deegan, when you put a fire in the work-train engine tomorrow morning don't forget to slip a fire in the donkey engine also."

"All right," I replied. "I will."

When the appointed hour arrived I tried the gage cocks on the donkey. They showed three solid gages of water, so I put in a fire.

About an hour afterward along came the engineer, old Bill Sayers, who happened to be a high official of the Brotherhood of Locomotive Firemen. Bill went nosing around and tried the middle and bottom gage cocks. Both showed dry steam.

"Here!" he angrily demanded of me. "What do you mean by putting a fire in this engine without any water in the boiler?"

I tried the gage cocks myself, with the same results; so I killed the donkey. Shortly afterward the division foreman showed up and asked me if I had put a fire in the donkey. I tried to explain, but he looked puzzled. Then he thumped the boiler with a stick, just like you would thump a barrel to see if it was full or empty.

"That's all right, Deegan," he said. "She has water in the boiler. You can put in a fire." He laughed. "You boys are not onto the capers of this water."

After putting a fire in her again, I tried the gage cocks. They showed two solid gages of water. To say that I was amazed would be putting it mildly. Old Bill was rendered speechless—which in his case was extraordinary.

Now, Benson is a way station on the S.P. main line between El Paso, Texas, and the Pacific Coast, situated at the feet of the Dragon Mts. The Espee keeps a flock of helper engines at Benson to boost trains over the hill. In a short period of time three different helper engines out of Benson dropped their crownsheets; their engineers were promptly discharged.

Then the Brotherhoods looked into the matter. They demanded that the management make a chemical analysis of the water in that vicinity. So samples were sent to headquarters. Chemical analysis revealed it was impregnated with some foreign chemical—sal soda, I believe—which caused it to foam and sometimes lift the body of water high enough and long enough to blister the crownsheet. So the three engineers were duly reinstated and peace once more reigned over the town of Benson.—JAMES DEEGAN, 153½ W. Elmyra St., Los Angeles.

* * *

THE Boomer Railway Men's Ass'n has arranged to present an all-railroad program on the coast-to-coast network of the National Broadcasting Co., in connection with "The National Barn Dance," sponsored by Alka-Seltzer. This Ass'n is now represented in U. S., Canada, Mexico, South America, and various parts of the British Empire. A gathering is planned for this year.—E. W. REITER (*president*), Shelly, Pa.

* * *

"WHEN I WAS A BOOMER OP," by Harry Bedwell (*April issue*) set me to wondering. Was Bedwell the S.P. operator at Salton, Calif., who late one evening handed up his monthly reports to a freight conductor? A bunch of reports is heavy. This op, being afraid the weight might break one of those light train order hoops, tried something else.

In the cupola I saw the order board green and the op lantern in hand, rushing out. I dropped from the cupola, out on the rear platform, made a stab for the hoop, caught it and wished I hadn't. This bright lad had tied the package to an iron barrel-hoop—a rusty one with edges notched by corrosion. It removed nearly all my coat sleeve, not to mention large areas of cuticle.

I am still guessing why he left six inches of string dangling. To the outer end of this surplus string he had tied two track spikes. When I ran my arm through the hoop it slid up to my shoulder, nearly amputating my arm when it stopped, while the spikes continued on their way until they twined lovingly around my body and hit me a solid jolt.

When breath finally returned we were too far from the station for my anathemas to reach his ears; so if the gentleman reads this he may consider himself cussed.

I am still wondering: Was he the op who, one rainy winter night, stopped an eastward extra on the Espee at Puente, Calif.? I drilled 60 car-lengths, plus 15 more from the east switch, and walked into a warm cozy office with a cheery:

"Hello! Whatcha got for us?"

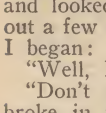
The op rose, advanced to the counter, and laid down two clearance cards. I set my lantern on the counter, picked up the clearances, and looked them over carefully while figuring out a few well chosen words to fit the situation. I began:

"Well, I want to tell you—"

"Don't tell me a damn thing, conductor!" broke in the op. "I've been cursed by every damn conductor who has gone through here tonight. Yes, I was asleep. If you want to turn me in to the dispatcher, go ahead."

No suitable repartee coming to mind, I went outside where I had a hearty laugh all by myself. Did I turn him in? Ladies and gentlemen, we didn't railroad that way in those days.—W. F. KNAPKE, 118 S. Main St., East St. Louis, Ill.

* * *



In the good old days when the word "boomer" meant ability and experience, there was a time when I was 26 years old. I had covered 23 states and worked for 18 roads. I was a telegraph operator when such persons were desirable, if not necessary, on railroads because telephone train dispatching was not then fashionable.

I landed in Denver with my appetite in good working order. Flat broke, cold and hungry, I sought the "relief station" maintained by O.R.T. members, where boomer telegraphers were given several days' food and lodging for which they reimbursed the O.R.T. after finding employment.

The chairman there advanced me $5 in cash and a hint that the D.&R.G. needed ops. The superintendent of that pike verified the good news by sending me to a station 30 miles from Denver where the opposite end of the block was held by a pretty girl operator. The station was on a difficult stretch of track, with a permissive block system and a private wire to operate it.

Two months were required to negotiate an exchange of photographs with the lady operator. Then one day came the news that she was to be relieved for a night to go home, 50 miles distant, for a short visit. That absence from the wire started me to writing poetry, so you can see I had it bad. Not long after I got a toothache, which was even worse. The female operator sent me a bottle of medicine by the conductor of a freight train.

Soon after she overlooked a train order. This boomer would have brought two through freights together between stations if the engineers had not seen each other's headlights in plenty of time. I fixed things with the trick dispatcher who had been with me in the Philippines, saying it was all my fault and not to discharge the lady op. But the super heard of it and fired her, myself, and the dispatcher.

The dispatcher came clean, adding that the lady and I were soon to be married. Thereupon the discharges were cancelled and everybody was happy again. The marriage occurred shortly afterward.—GEORGE OSGOOD, 212 East Liberty St. Cincinnati, O.

* * *

OCCASIONALLY you print a letter from H. J. Woodworth, of Alamosa, Colo. Woodworth is secretary and treasurer of B.R.T. Lodge No. 401, to which I belong. He is an old-timer who has worked on all the narrow-gage lines of the D.&R.G.W., as well as on the late lamented Colorado Midland and other standard gage pikes.

I want to hear from some of the old-timers who were working for the Burlington in Alliance, Neb., in 1920-1; also from some of the rails around Phoenix, Ariz.—D. G. PETERS, Chiriqui Land Co., Puerto Armuelles, Panama.

* * *

THE Southern Pacific has a branch running out of Portland, Ore., the old P.&N., which after leaving Hillsboro twists and winds for about 35 miles, through Buxton, Banks, Timber and Westimber to Cochran, which is the summit and a logging and lumber-mill town. During the years 1926-1928 I was working second trick for the S.P. at Cochran and learned how 19 log flat cars went into the canyon. Here is the story:

The Blue Lake Logging Co., working on the south side of the S.P., was bringing in 60 to 90 cars of logs a day. It operated several Shay and Climax engines on their own tracks. After bringing down the loads these engines would grab a string of empties and take them back up to the loading points.

A man whom I shall call Williams hired out as engineer. He had run passenger on one of the best roads in the country, but the booming habit proved too strong. On the day this all happened, Williams had coupled onto the downhill end of 24 log flats and pulled out of Cochran just before dusk, to fill the loading spurs before tieing up at Camp 5 for the night, pushing the empties ahead of the Climax.

About a mile and a half out of Cochran was a dead-end spur which would hold four log flats. Having more cars than the other spurs would hold, the crew's intention was to put four of these on this spur and go on up the hill, spotting as they went. In the morning they would come back down, get these four empties, go on up the hill, clean out the upper loading spur and leave the four empties for that crew to work on while making the clean-up.

This spur was the continuation of a straight piece of track, while the main line curved sharply to the left and began at the end of a cut. It was the practice for the head brakeman to jump off the train and run ahead, throw the switch, and then run back and mount the right-hand side of the bank at the cut.

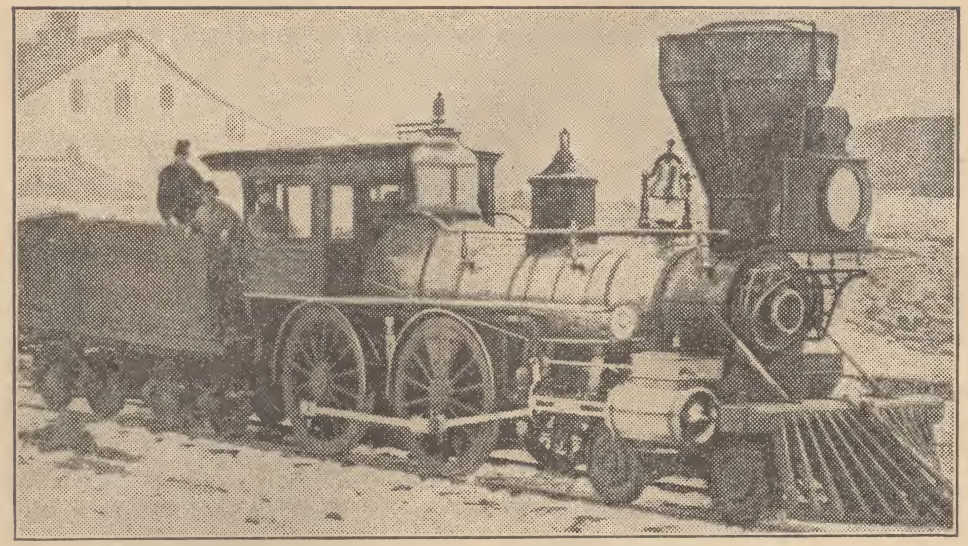


Photo from Collection of R. C. Schmid

Utica & Black River Engine No. 6, the "Isaac Maynard," Built by Schenectady in 1868, Became No. 82 on the Rome, Watertown & Ogdensburg, and Was Scrapped in 1892

But this time there was some talk about the swing man taking the signal-passing place on top of the bank, while the head man would stay with the cars and signal him when the spur was full. Anyhow, the swing man did not get up on top of the bank. The engineer, not receiving a signal of any kind, kept the steam working.

So the head man rode the cars until they began going over the end of the track—which, by the way, ended on a fill which resembled a mine dump. He gave washouts until the engine came around the curve and in sight of his signals. When the train came to a stop, 19 of the 24 log flats they had started out with were over the dump and into the canyon. The engineer stopped on his way out and told me what had happened. He left the engine up there and walked to Cochran. The last I saw of him he was still walking.—Fred I. White, Loraine Hotel, Portland, Ore.

* * *

BUFFALO ROCHESTER AND PITTSBURGH RY.
"SAFETY AND SERVICE"

READING "A Rush Coal Delivery" by Silent Slim (*Feb. issue*) recalls an exciting ride in which I participated; but my runaway, unlike his, had no destination.

Back in 1906 I was waiting in New Castle Jct. yard for B.&O. No. 98, aiming for Washington, Baltimore, Norfolk or where. Along came a drag of mixed stuff. Swinging upon the crummy, I discovered it was not B.&O. but B.R.&P. So I was heading in the direction of Buffalo.

Where to—who cares? I was 23, with five years' experience as brakie. My receipts were in order and all roads were begging for experienced men. The flagman asked: "When did you eat last?" Result, eats.

Later I awoke in the cupola and yelled: "Where are we?" Answer: "Going into Punxsutawney yard." I went to sleep again. Hours later, at 2 A.M., we pulled into East Salamanca, N. Y.

In the morning I saw Trainmaster McGarvey and was promptly hired and put through the medical exam.

After several days' work I was called for the third trick at midnight with engine 86; Condr. Edwards and Engr. Skiles. The East Salamanca layout was a gravity yard—meaning a heavy grade; ride everything, no need to bat 'em; just pull the pin; field man, catch and ride 'em in. It was a dark night, just right for a big wreck.

I was playing field, catching them and riding 'em solid. Down came a loaded boxcar, single brake, formerly rolling stock owned by Quaker Oats Co. This I mounted at about 20 miles per hour and leisurely tested the brake. It seemed O.K., so I prepared for a long ride and, of course, a long walk back.

However, in testing the brake, I had run out too much slack, permitting a large link of chain to drop off the hook of the rod. Examination later showed the rod had been bent, while the hook was flat instead of straight up.

I slid down the brake stem to see if I could reach the short chain which I knew would be dangling from the end of the brake stem, but as I had no club I could not reach the end of the brake rod, and my little lamp was not much help. By the time I got back to the stirrup my car was very close to the ladder at the yard limit and a yellow switch light. Realizing that I could outrun the car, I sprinted—which was rare for a switchman of those days—and lined up the lead.

By that time I was very close to the slip switches of the main line, which were in charge of a regular switch-tender. I went high and

yelled for the southbound, but the switch-tender became confused and lined the slips for the northbound main instead.

I was not yet familiar with regular schedules, but I knew that northbound coal trains ran often and hit that particular grade hard to make the yard. There was nothing I could do except stay with her, ride high; and in case a northbound coal drag showed, swing washouts as long as I dared and then leave her, hoping the crew of any oncoming freight would do the same.

After about three miles of this the grade ran level and my runaway gradually lost speed. But at every click of rail joint she seemed to sing: "I got away, I got away!"

Fear of a head-on collision with a northbound train made me desperate enough even to sprint ahead and place chunks of ballast on the rails, which did have some effect upon the speed. My hopes were about zero, however, when I sighted the lights of Killbuck crossover. I had no switch key, being newly hired—but what the heck? I had fought the darned old runaway thus far. I'd try anything.

This car had a six-inch end sill. This enabled me to toe over and remove the coupling pin, which was loose and had no cotterpin. I was not worried about losing the knuckle; it was only an old improved Jenny. With my lamp still on the running board and no light but the moon, I started to beat my runaway to that crossover, with the coupling pin to serve as a key.

One swipe for each lock enabled me to line up that crossover quickly. I was able also, by much footwork, to reline the switches behind me. As I attempted to remount, I stepped the wrong way and severely turned my ankle. But I succeeded in retrieving my lamp from the top, and since danger of a head-on collision was now over and I was breathing more easily, I rode the stirrup with one foot until this old bad-order car came to a stop.

After making sure she would not take the bit in her teeth again and start another flying trip, I limped back in time to flag my engine which had stopped everything to chase me. That conductor, Edwards, knew his stuff. He dropped a flag for southbound trains at the slips, and, not wasting time to argue with the dispatcher about it, he came on *with* the current of traffic, not *against* it as I had done.

As soon as he saw me he said: "Get in the cab until we have time to look at that ankle!" Then he reconnected that hand-brake, returned to the yard, and decided to swing my car to the track where it should have been anchored in the first place.

Engr. Skiles was up the ladder, the conductor at the switch, and the head brakeman at the pin. Skiles gave the slack and started to get away. Bump! Roar! Crash! Old 86 had picked the switch and left the iron!

That was bad enough, but to make things worse that old car plowed into the tank. Talk about a mess, here was one! The engineer, fireboy and I were tangled up on the floor of the cab. The front man had jumped to safety. Condr. Edwards also had found the open spaces, and how! A check-up revealed no one hurt except for my sprained ankle.

In due time the big hook arrived and cleaned up. I'd had rough experiences before and since, but that two-by-four yard was my idea of too much. So I told the G.Y.M. it was all my fault—though *how* or *why* I don't know to this day. I still believe that car was jinxed. Anyhow, I pulled the pin and set sail for my original destination, Norfolk, Va., where for a few days I was the only white yard brakeman in that yard. But that's another story.—"No Brake" Jack Nolan, R.D. 1, Beaver Falls, Pa.

* * *

JACKSON SMITH, whose portrait appears on the 15c. Canal Zone stamp, was a boomer. He was born in South Carolina on Aug. 25, 1864, began work on the L.&N. at 17, and has since railroaded in Ecuador, Colombia, Mexico, and Jamaica. Thus he had much experience handling labor in the tropics.

Smith entered the service of the Isthmian Canal Commission on July 18, 1905, as assistant to the chief engineer. On Nov. 19, 1906, he was made head of the department handling labor and housing and subsistence for canal workers. Resigning Sept. 15, 1908, he became vice president and general manager of the Oregon Direct Line Railroad, with headquarters at Portland, Ore. He died Jan. 29, 1910.—Robert White, Pontiac, Mich.

* * *

UNTIL the Depression struck in I was a mule-skinner (mule-driver). I came from the Ozarks in Missouri and have been to British Columbia, not to mention the end of all the roads in Oregon, Washington and Idaho, usually in side-door Pullmans but sometimes on flats and in reefers. I can't recommend reefers (refrigeratior cars) for cold days. Sometimes I rode in cabs. On my last such ride I refused a job firing because I had $26 in my pocket and also because it was on a logging road.

If pressed, I could tell of an abandoned logging road which, by a series of switchbacks, leads up to a lake made by pouring five to fifty feet of water around stubs the loggers left behind them. That lake is full of fish eager to be caught. It is about 30 miles from Bellingham, Wash.—Robert W. Sooter, 27 Laurel Ave., Walla Walla, Wash.

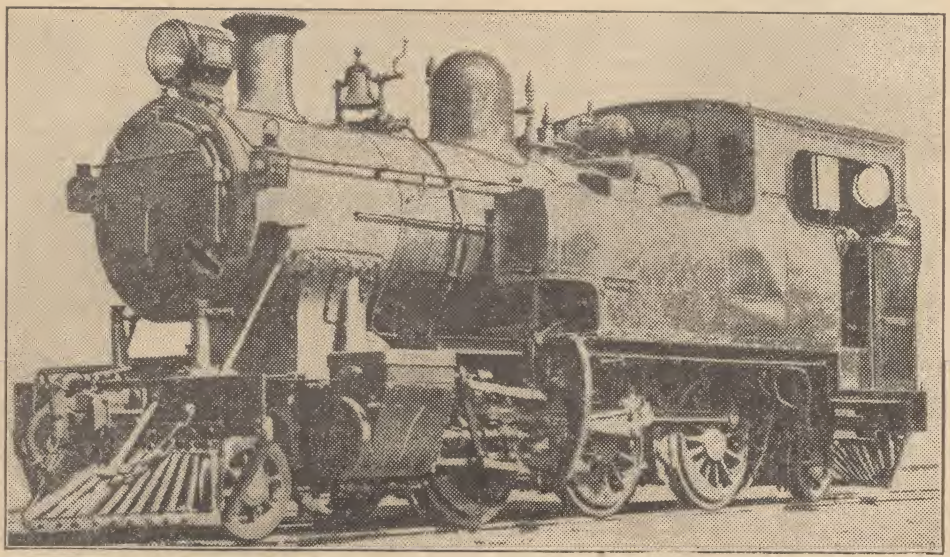
* * *

JUST before Christmas I took the weekly mixed train on the old Central Pacific line around Great Salt Lake. At Lucin, junction with the new line, I held a session with third trick operator, Sullivan, an old boomer. He described a stunt that was new to me.

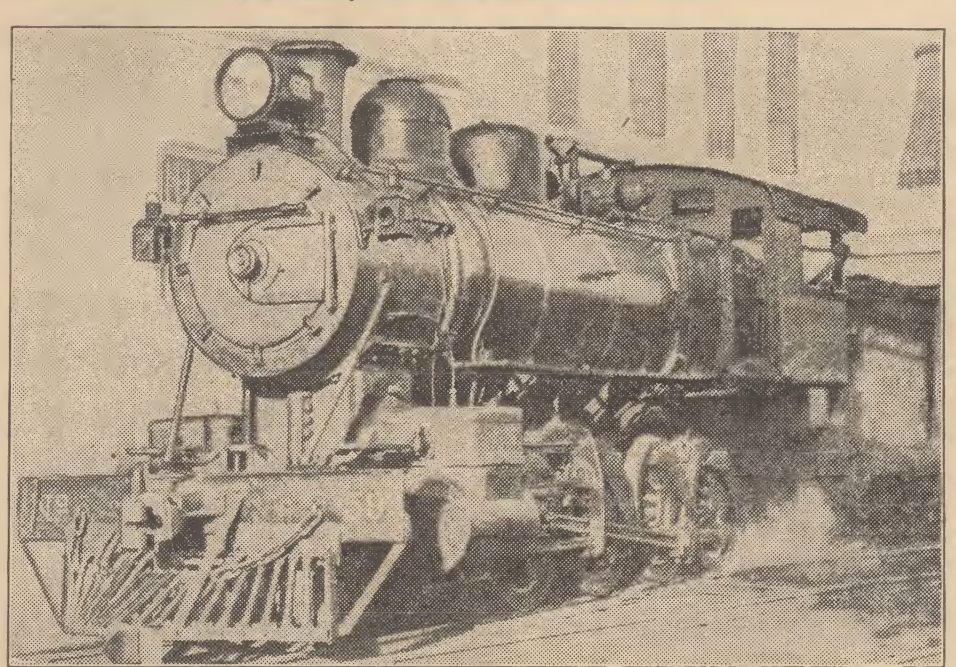
While employed at Midlake (on the trestle) he joined other men there in celebrating the night of July 4th by dropping lighted fusees in the lake. They would sink to the bottom and, being waterproof, would burn the regular time, producing wonderful effects in the dense salt water.—Raymond Phelps, 1319 24th St., Ogden, Utah.

OLD AND MODERN MOTIVE POWER IN PERU

Photos by Fred Jukes, Blaine, Wash.



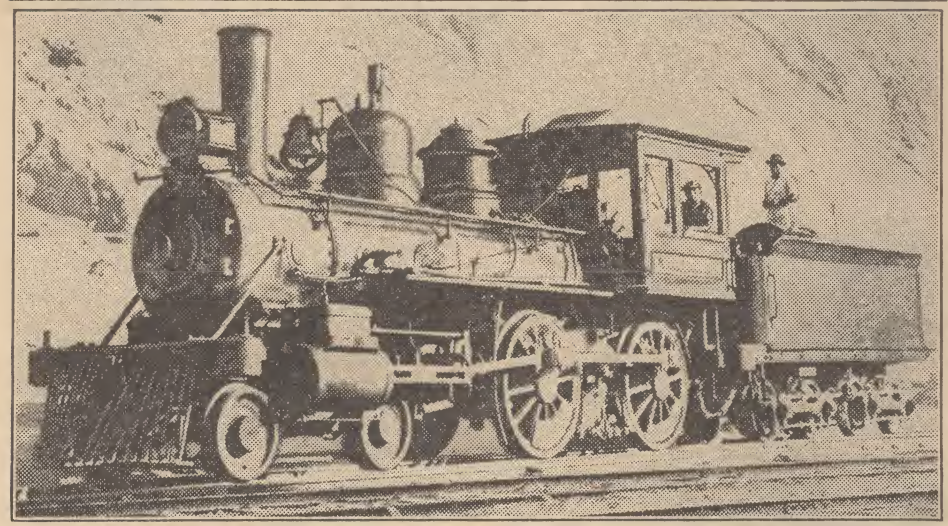
Tank Engine of the Peruvian Central, Used in Suburban Service between Callao and Lima. She Was Built by the North British Loco. Co. in 1908



Ten Consolidations Like This, Constructed in the Rogers Works of Paterson, N. J., in 1907, Are Used by the Central in Passenger Service between Callao and Oroya

The Photos on the Next Page: (Top) A Baldwin-Built 0-8-0 of the Two-Foot Gage "Supe & Barranca & Reparticion to Alpas Railroads." She Is Fitted with the Marshall Valve Gear, a Very Simple Motion. (Center) No. 1 of the Paita-to-Piura Ry., an Eight-Wheeler Built by Baldwin in 1875, Still in Service. (Bottom) A Modern Beyer-Garratt Articulated Engine of the 2-8-2 + 2-8-2 Type, Built by Beyer-Peacock & Co. at Manchester, England, in 1932. She Is No. 125 of the Central. She "Rides Like a Pullman"

FF. CC. SUPE Y BARRANCA
Y REPARTICION A ALPAS
7

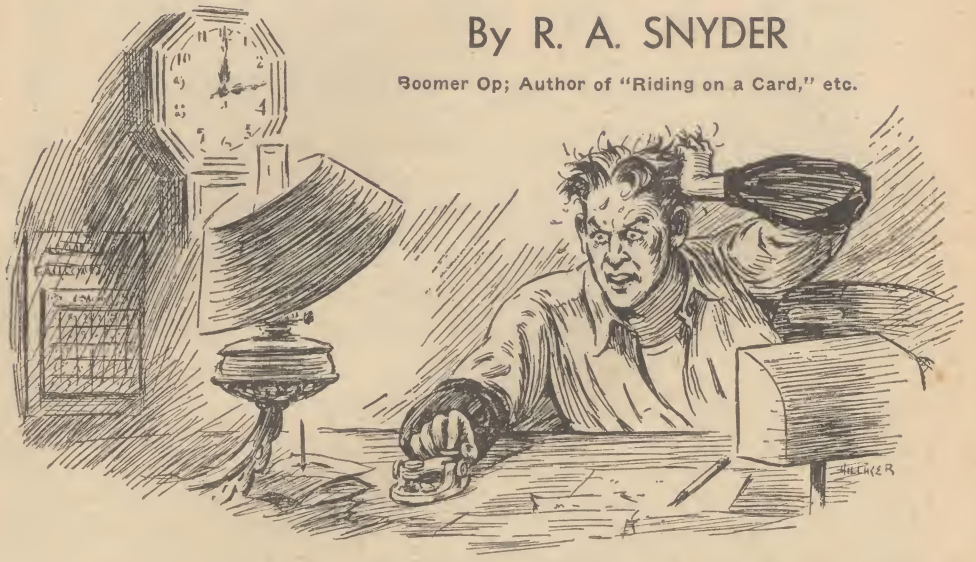


125

Ready in Five Minutes

By R. A. SNYDER

Boomer Op; Author of "Riding on a Card," etc.



BILL STEVENS, boomer train dispatcher, pounded a mean key in answer to the smart alec lightning slinger at Cross Fork. That fellow, who was also a boomer, was two pains in the neck, according to Bill Stevens—especially between the dead hours of morning from one to four, when almost anything can and does happen.

The eastbound Extra 135 had been at Cross Fork for fifty minutes, but the operator still refused to go into the yards to learn the cause of delay.

Bill rapped his key: "Go see what's holding that 135! I've got the 147 stuck west at Burrows."

"Nice dispatching," taunted CF, "but I'm no trackwalker."

"You'll have a chance to walk in the morning," Bill flung across the valleys and mountain.

"I've walked," clicked the wire, "from better pikes than this."

The dispatcher closed his key and sat back to swear. His hand moved to the phone. He'd call the chief. But the poor devil had been up a day and a night clearing the east end of a derailment. It wasn't fair.

Bill's brows wrinkled. His eye strayed toward the droning relay on the far end of his desk—the commercial wire. Once he started to plug in there, but dropped the idea.

Five minutes went by. He called Cross Fork again: "What about that extra 135?"

"The conductor came back," clicked CF. "He says the engineer's packing a tender hot box. They'll be ready in five minutes."

Bill repressed a desire to call the operator a liar, for every nerve of him warned him something was in the air. But Superintendent Allen's injunction the day before had been pertinent.

"You're in charge at night, Stevens," the official had said. "Report the sleepy operators and trainmen who won't play ball. I'll can them. It's that or—" he'd left the rest unsaid. But Bill knew.

The dispatcher watched the slowly-moving minute hand of the clock. Five minutes—ten. He called Cross Fork again.

The reply came: "Brakeman returned and said they'd be ready in five minutes."

"Five—what's he doing?"

"The engineer's got a side-rod down," spelled the wire evenly.

Then Bill Stevens blew up. He didn't notice the silence of the commercial wire, nor the office cat, nor the clock. He grabbed the phone and called the shop. A sleepy voice answered.

"What the devil," Bill demanded, "ails that 135? She's up at Cross Fork with a side-rod down an' I've got a man tied up at Burrows."

"'Tain't the 135," denied the shopman. "That's a good Mike. It's that fool crew. Northam, ain't it?"

"Yes, sure—why?"

The shopman laughed. "That's a boomer bunch—a train and engine crew the boss hired to help out in this coal rush. Call the super. He hired them."

Bill started to do as he was told, but decided to wait. Perhaps, after all, the crew was in trouble. But he couldn't move the 147 up to Cross Fork for a meet, as the yard there was plugged—full of cars. Only in case of emergency. Other trains were coming up the far side of the hill to set out cars of coal in Cross Fork yard.

Bill called the operator again. "Extra 135—any report?"

"Brakeman went back," said the operator crisply. "Flagman just came by, though. He said the engineer was packing the throttle."

"The—" The train wire went open. Bill's words sent the cat flying. Then: "Go out there and see what's wrong. You hear! I can't run trains unless I know what's going on."

"Nuts!" clicked the insolent op.

•

BILL grabbed for the phone again. This time he called the chief. In that sleepy man's ear he poured the whole story.

"It's a boomer outfit," the chief explained calmly, for chief dispatchers never get excited. "I'll can them and the operator in the morning."

"But the road's tied up. I've got a man ready to leave Galeton, here, in thirty minutes, too."

"Get the 135's conductor," instructed the chief. "Take away his orders. Deadhead the crew in on something. Call another crew to go after the train."

"Yes, he'll can them," Bill muttered. "I see him canning anyone, with men as scarce as brains in an engineer. Hm-m! Well, I'll get away from this bunch of boomers, by cracky."

He fished a letter from his pocket and reread it. The letter was from the superintendent of the Denver & Rio Grande. They were desperately in need of dispatchers at Denver. Bill was to wire the official where to put out passes for him to come to Denver.

The dispatcher pulled the plug from his train wire and cut in on the commercial, as a familiar hand signed off.

"Sounds like that ape at Cross Fork," he thought. "Now what the devil was he doing on the Western Union wire? He doesn't handle . . ."

Bill began calling PG, the relay office. He got a quick reply.

For a few seconds he played with the wire while formulating his message, then he began sending. The Rio Grande was to put passes out at Pittsburg. Bill Stevens would come at once.

PG was slightly slow in sending his okay, but finally did so. Bill heaved a sigh of relief. He vowed solemnly,

"I'll go where this bunch of apes won't find me," and began calling Cross Fork.

The fresh operator would have hardly had time to walk out in the east end of the yards, but Bill called. He was surprised at the brisk response.

"Ready in five minutes," said CF.

"He's what?"

"The flagman says they'll be ready in five minutes. All they got to do is set out a lunged car"—meaning, of course, a car with a drawbar pulled out.

Bill swore openly. Then: "What's been the delay?"

"That was it; pulled a lung."

"Listen!" Bill sent the electric dots and dashes flashing from his key. "Go get that conductor. I'm going to annul his orders. Tie him up there."

There came a pause. Then: "Northam says he don't want to."

"Northam," the dispatcher spelled out savagely, "has tied the road up; now I'm tying him."

"Okay. I'll tell him."

BILL called Burrows and instructed him to get the Extra 147 west ready to move as soon as he could change the orders. Galeton yard cut in for running orders for another Extra west, engine 165. Bill fixed them as far as Burrows.

Then he called CF and put out a 31 order changing the meet between Extra 135 east and Extra 147 west from Burrows to Cross Fork. As soon as Northam signed it he would complete the order to Burrows.

The clock moved faster as Bill waited. Several times he called Cross Fork, but got no reply. With a sigh of resignation he placed his feet on the desk corner. A half-hour went by.

Again he called Cross Fork. This time the lightning slinger replied instantly.

"Did you get Northam?" Bill asked.

"I told him, but he said never mind the order; he was—" The wire opened. Bill stormed.

Ten minutes went by. Bill poked the coal fire in his stove, faintly aware that the commercial relay was buzzing something. He came back and cut in just in time to hear the Cross Fork operator sign for a message. That was about the last straw — holding the train wire open while he transacted commercial business! At that moment the train wire went closed. Bill grabbed at it.

"What the devil did you hold this wire open for?" he demanded.

"22." The signal that the Cross Fork op was busy on other wires.

The dispatcher raved. No rules permitted an operator to leave the train wire upon any excuse whatever when he was working there. Bill's fingers cracked the key with the curt message, "Sig?" (signature to the order).

The wire went open a full moment and CF slowly clicked back "Extra 135 east departed 3:47 A.M."

When Bill Stevens recovered he called Burrows and killed the order there. Only the knowledge that he would be away with the arrival of the day man kept him from going mad. Not another night would he work on this road. He was going to Denver.

He started to note the delay of Extra 135 on the sheet, but paused thoughtfully. After all, he didn't know what was the delay up there. He'd wait until the boomer crew came in. Bill dropped the pen.

But he was to know the cause of the delay at Cross Fork long before the train came in. And the information was to change him from a boomer to a home guard.

He stroked the cat and talked to it.

"Kitty," he said happily. "I'm going west again. I'll go in the morning. Never another night will I work with that lousy bunch of boomers. I'm going to Denver, Kitty."

The creature purred understandingly. An hour later Burrows reported the train coming down the mountain. Then he reported both trains away.

DAY was flushing the eastern horizon when Bill became aware that PG was calling him on the commercial wire. He cut in.

It was a deadhead message from Denver. It told William Stevens that the Rio Grande was placing a pass for him at Pittsburg and requested that he wire when he would leave. They were urgently in need of dispatchers. Bill okayed the message and reread it with a thrill of happiness. He was free—free of the boomers!

"Say," it was PG talking on the wire. "Reckon I can get a sine in Denver? Seems everyone's going."

A *sine,* of course, meant a relay operator's job, so called because many roads furnished the new man with a personal sine—letters to use in receipting for messages.

Bill toyed suspiciously with the key, his brow wrinkling. So "everyone" was going? *He* wasn't everyone. However, in true boomer fashion he told the operator they needed men at Denver. Sure he could get on. As an afterthought he asked: "What you mean, *everyone's* going?"

The PG man made a couple of wire laughs. Then: "I've handled messages from that lightning slinger at Cross Fork tonight. He's going, and Conductor Northam and his crew and engine crew's going, too. Didn't you know?"

Bill Stevens pulled the plug with a lurid string of profanity. So that was the cause of delay! The crazy boomer crew had deliberately stayed there while they got a message through to Denver for another job.

"Ready in five minutes—huh?" He laughed, and then made another vow.

"I'm *not* going to Denver," he told Kitty. "Not never." And again the office cat purred understandingly.

The Hoghead Says

LIVIN', I'm callin' this, Barney;
We're on a peach of a run.
You've got enough of my blarney?
Why, you young sonovagun,
I'll have you swingin' that shovel,
Till you'll be wishin' you're dead.
What's that you're sayin'?
Stop my fool brayin'?
Hell! You're plumb out of your head.

Keep that steam up an' no quittin'!
You'll do some stokin' tonight.
Seventy's what we'll be hittin',
When we get rollin' her right!
Grin, while you're findin' it easy!
Super's sprawled somewhere in back?
Time to be goin'?
What's the board showin'?
Green? Then we've got a clear track.

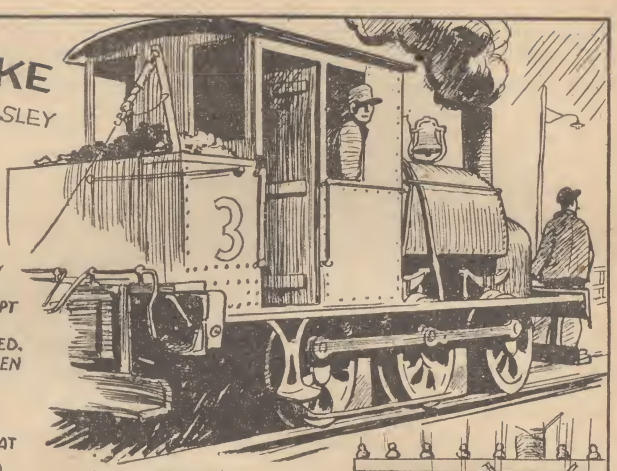
Throttle eased open, we're kickin'.
That's what I call a swell start.
Nary a jar! Get the clickin'
Of the switch frogs? Have a heart?
Lay off the fool bellyachin';
Nothin' like that's in the cards.
Shrill whistle tootin',
We're swiftly shootin'
On the main line from the yards.

Glory! My fist on her throttle,
While I hang over her sill
Like a stringbean in a bottle,
I'm sure gettin' a thrill.
Squintin' ahead through the blackness,
Hearin' the big drivers sing
To the sparks flyin',
Barney, no guyin',
This beats the job of a king!

—Edgar Daniel Kramer

ALONG THE IRON PIKE

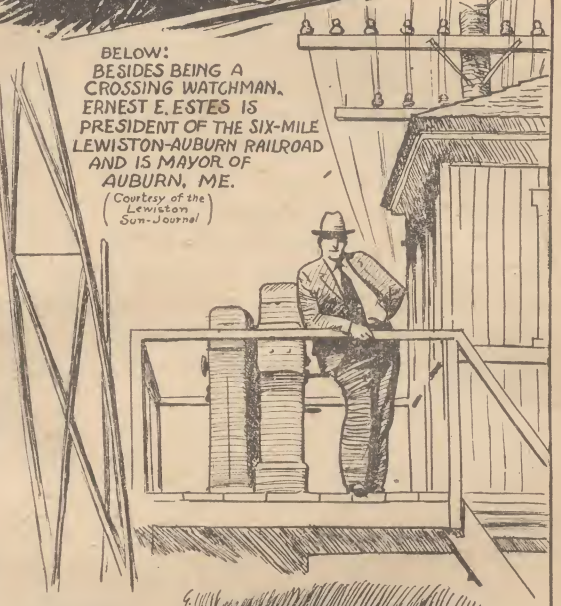
by JOE EASLEY



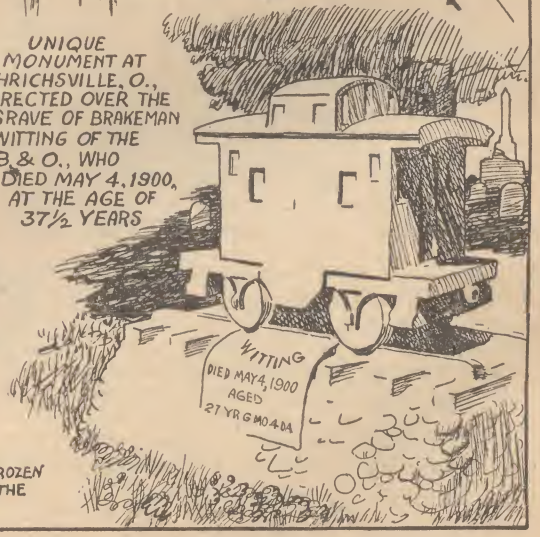
IS THIS THE OLDEST LOCOMOTIVE STILL IN SERVICE IN NORTH AMERICA? NO. 3, OF THE 120-MILE SYDNEY & LOUISBURG RY. IN NOVA SCOTIA, CANADA. SHE WAS BUILT IN 1870 BY HUNTSTEAD ENGINE CO., ENGLAND, AND IS SAID TO BE UNCHANGED EXCEPT FOR STACK, CAB, BELL, AND TWO INJECTORS. SHE IS INSIDE CONNECTED, 0-6-0 TYPE, AND HAS LARGE WOODEN BLOCKS FOR BRAKE-SHOES. HER HOGGER IS JAMES M. McRURY, OF LOUISBURG, N.S., AND HER RUN IS ON THE COAL BUNKERING PIER AT SYDNEY, N.S. (Drawn from Photo by Hugh Lightbody; See I.E.P.C.)

JOE NERLING, RETIRED BAGGAGEMAN, 1421 ALBANY ST., SCHENECTADY, N.Y., WAS ONE OF THREE MEMBERS OF D.&H. CREW WEIGHING A TOTAL OF 878 POUNDS, SAID TO THE WORLD'S HEAVIEST TRAIN CREW (From "D.&H. Bulletin")

HUMANE ENGINEER. HARRY CARMICHAEL, 222 MILWAUKEE ST., SAVANNA, ILL., STOPPED HIS TRAIN IN THE CENTER OF THE CRESCENT BRIDGE OVER THE MISSISSIPPI LAST DEC. 8 TO SAVE A HALF-FROZEN FRIGHTENED DOG. HARRY HAS BEEN WITH THE MILWAUKEE ROAD SINCE 1903



BELOW: BESIDES BEING A CROSSING WATCHMAN, ERNEST E. ESTES IS PRESIDENT OF THE SIX-MILE LEWISTON-AUBURN RAILROAD AND IS MAYOR OF AUBURN, ME. (Courtesy of the Lewiston Sun-Journal)



UNIQUE MONUMENT AT UHRICHSVILLE, O., ERECTED OVER THE GRAVE OF BRAKEMAN WITTING OF THE B.&O., WHO DIED MAY 4, 1900, AT THE AGE OF 37½ YEARS

On *the* Spot

IF we were compiling a Distinguished Service roll of readers, based upon the amount of cooperation shown to our editorial crew, we'd have a long and impressive list of railroad men and railroad fans, both male and female, who've gone out of the way to be helpful.

We're proud of our friends. Proud and grateful for what they have done to keep this magazine on the high iron month after month, year after year.

Every day a batch of letters from all over the world is laid on our desk—letters which give us the warm pleasant feeling that our work is not wasted. Letters for the various departments. Letters enclosing subscription checks. Letters giving information, suggestions, or criticism.

No matter what kind of letter or card it is, we appreciate the fact that somebody somewhere is sufficiently interested to write to us. Without that daily supply of mail we'd have to close up shop. For those letters show that Railroad Stories is striking a popular note and filling a need in the world of journalism.

Just one instance of reader cooperation—of which there are thousands, in one form or another.

You remember reading F. A. Goldsworthy's true tale "Creamed Peas" in our May issue. Goldsworthy is a juice trainman. He made himself a candidate for our Distinguished Service roll by canvassing 100 railroad men between Pocatello, Idaho, his home state, and Butte, Montana, giving them a chance to read our February issue and then asking them to state what part of the magazine they liked most.

Results of the poll are interesting. "Blacklisted," by Ed Samples, led the list. "Jim Hill's Great Adventure," by H. R. Edwards, ran second. Then came the Lantern department and "Agent for a Day," by R. A. Snyder, and the Spot department; and the rest were scattering.

Thanks, Mr. Goldsworthy! Observe Samples, Edwards, and Snyder on our June contents page; you can realize how much we value your test poll.

Which brings us once more to the Reader's Choice coupon on page 143. Everyone who fills out that coupon, or makes his own form and sends it in, is doing what Mr. Goldsworthy did to help us, only on a smaller scale. It is important for us to know how you fellows react to what we print in this magazine. Here is the line-up from our April issue, listed in order of popularity:

1. Gods of Iron, E. S. Dellinger
2. True Tales of the Rails
3. By the Light of the Lantern
4. Trains Making Good (The Mercury)
5. George Pullman, H. R. Edwards
6. Seniority, Clifford Sweet
7. On the Spot
8. Another Brown, John Thompson
9. Rails Across Panama, F. Westcott
10. International Engine Picture Club
11. Locomotives of Virginian Ry.
12. Riding on a Card, R. A. Snyder
13. Model Railroading
14. The Boomer Trail
15. "Pan-American" on the Air

* * *

USING the sides of boxcars for billboards was suggested by several readers in our recent article, "What the Public Thinks of the Railroads." We don't know if any pike has taken this idea seriously, but we do know that some of the cars in Spain, both passenger and freight, are painted with military propaganda after the manner of circus billboards. One coach of a troop train is gaudily painted with the picture of a man shaking his fist at a horned devil wearing a swastika, with these words splashed across the side of the car in huge letters: "Unamonos Para Aplastar Al Monstruo Fascista!!!" (Let Us Unite to Crush the Monster Fascism.) We'd like to hear of other odd uses for railroad cars.

* * *

IT looks as if the picture in "Along the Iron Pike" this month answers our question as to which is the oldest locomotive now in service in North America.

However, we learn from Charles B. Chaney, an authority on Baltimore & Ohio motive power, that an even older engine is B. & O. No. 316, one of the Perkins eight-wheelers, built at Paterson, N. J., in 1865. The 316 is still used in Manhattan yard service, but only occasionally, so you could hardly say she is now in regular service.

We are waiting to hear about other "oldest" engines still pounding the rails here or abroad. Address Freeman H. Hubbard, Editor of Railroad Stories, 280 Broadway, New York City.

What's Wrong with the Railroads?

ARRIVING at a large city in the Northwest, I asked at the depot ticket office for a lower berth to continue my journey. After shuffling his Pullman charts, the ticket seller said no lowers were left. At the city ticket office, however, I secured a lower. Two lowers in the car were unoccupied that night.

An isolated incident? No! Ask any man who travels much. He will tell you that you never can get service at a depot ticket office.

Next morning I arrived at destination so early no porters were about. The engineer stopped with baggage and express cars opposite the station. Passengers carried their heavy luggage several hundred feet. That engineer had forgotten what passenger trains were for.

One railroad I used advertises a monstrosity they called "The Salad Bowl" as if it were proud of forcing diners to eat out of a common trough. In case you don't know, I may explain that a "Salad Bowl" is passed from table to table so each diner may fondle its contents, sneeze into it, and put back items he doesn't want. Yes, they do; I've seen them. That railroad insults its patrons by assuming they are too dumb to understand that the "Salad Bowl" is anything but a measure of economy.

On five or six railroads mealtime is something to look forward to. Passengers go out of their way to patronize one of the oldest lines for the sake of its excellent dining-car service. But with a few exceptions railroads work on the premise that passengers are marooned on the train and must eat what is served and like it.

My ticket sometimes consists of a long string of coupons. Does the conductor take what he should and give me back the rest? He does not. He appropriates the whole works and gives me an identification slip. If I want that ticket I must remember to call for it lest the last man to fondle it forgets. He does forget, sometimes.

I hope I'm no snob; but the matter of letting tourist sleeper passengers use club and observation cars seems to me a clear violation of contract. On one trip out of Chicago two youths practically took possession of the club car all the way West, monopolizing radio, magazines, and best seats, although I had paid full railroad and Pullman fares to have these same facilities.

Why do Western roads inflict news butchers —intolerable nuisances—on their patrons?

I find hotels and movies better. Even taxi drivers are more honest.—R. G. CLARK (*Vice President and General Manager, Piggly Wiggly Corporation*), Cincinnati, O.

* * *

AT a hearing before the Public Utilities Commission on a protest against discontinuing service by the New Haven of a gasoline coach between Marlboro and Framingham some interesting facts were developed. For instance: Breakdowns were so numerous that passengers had organized a pool, the daily pot going to the passenger who guessed nearest to the spot where the next breakdown would occur.—DONALD CRAFTS, 808 Salem St., Malden, Mass.

* * *

DELLINGER'S "Gods of Iron" (*April issue*) is a masterpiece. In presenting it as fiction you were guilty of misbranding, for the story contains more fact than fiction. That story tells how to correct some of the things that are wrong with the railroads. You should send marked copies to rail officials.—EDW. STRINGER (*railway postal clerk*), 499 Ashland Ave., Buffalo, N. Y.

"Silent Barriers"

"SILENT BARRIERS," the new Gaumont-British movie dealing with the building of the C.P., has great interest for railroad men. It was filmed in and around Revelstoke, B.C., with a cast headed by Richard Arlen, Lilli Palmer and Antoinette Cellier. Cost of production ran close to a million dollars.

Stalking through the picture are Jim Hill, Wm. C. Van Horne, and Donald Smith. Also Major "Hells' Bells" Rogers, who discovered the famous pass through the Rockies which now bears his name. Also train and engine crews and section hands supplied by the C.P., and Chinese coolies, cowboys, "Mounties," and Indians.

Both the C.P. and the Canadian Government cooperated in this production. The city of Revelstoke, actual scene of historic episodes, was turned over completely to the movie outfit, which made a complete reproduction of the old town of Moodyville as it looked in the '80's.

With ancient equipment, thousands of shovel-wielding extras, and tons of dynamite, the company duplicated a stretch of the C.P. as it was in pioneer days. More than 1000 yards of track were actually laid, paralleling the real road, and a mountainside was blasted off for the roadway.

The film closely follows actual history, including the fight between Jim Hill and the Canadian directors, the swallowing of engines and trains by treacherous muskegs, and the driving of the last spike, based on an actual photo of Donald Smith wielding the spike maul.

A Couple of Shots from the New Railroad Film, "Silent Barriers," Which Is Well Worth Seeing In Spite of Its Having Too Much Melodrama and a Too-Modern Old-Time Locomotive. (Upper) Richard Arlen, in a Checked Shirt, and a C. P. Engine Crew. (Lower) Three Men at the Left Represent Van Horne, Donald Smith, and Jim Hill. The Fellow in the Light Hat Portrays "Hell's Bells" Rogers

FANS interested in logging roads should see "God's Country and the Woman," a technicolor motion picture by Warner Bros. A Shay locomotive, No. 14, of the Crown-Willamette Paper Co., plays an important part.—ALBERT FARROW, 132 Tenth St., S.E., Auburn, Wash.

ALTHOUGH S.P. equipment appears in many motion pictures, there are no S.P. rails in Hollywood. The only railroad entering the city limits is the Pacific Electric. The Santa Fe also appears in many pictures.—VERNON C. AXT, Placerville, Calif.

Narrow-Gage Streaks o' Rust

SOME years ago Mrs. Smith and I were visiting her grandparents and Aunt Addie at Port Royal, Pa. We went to a picnic while there, traveling on the old Tuscarora Valley narrow-gage from Port Royal to Schmittle's Park. On the way up a long hill passengers had to get out and push. At the top of the hill the engineer stopped to take water through a hose down the bank to a creek.

I never heard any more about that road, except that it was abandoned. Maybe some reader will be kind enough to tell me its history.—M. E. SMITH, (*ex-train dispatcher*) 540 Gladstone St., Sheridan, Wyo.

* * *

THAT picture of the "snake" track of the three-foot-gage Cincinnati & Westwood Railroad (*April issue*) interested me. The project was organized in 1874. One subscriber to the fund was James N. Gamble, of the original firm of Proctor & Gamble, makers of Ivory soap. The inbound terminus was Brighton station of the C.H.&D.; the other was Glenmore, now part of Cheviot.

For 10 years the line maintained a precarious existence, using small steam locomotives and cars with seats lengthwise. As the narrow gage prevented the interchange with freight and passenger cars on other roads, the C.&W. was not highly profitable. On Sept. 1, 1886, operations were suspended. Mr. Gamble, heading a committee of seven, bought the road, standardized the gage, arranged passenger service to the old C.H.&D. depot and interchange of freight cars, and the road prospered. A day's work was 19 hours. In 1896 the Cincinnati Street Ry. Co established service to Westwood and Cheviot; while a steam road, the C.&O. of Indiana, began cutting into the freight traffic; so eventually the C.&W. had to give up the ghost.

That is why today an abandoned and pathetic streak of rust still connects the two communities, Cincinnati and Westwood, already joined in an individual corporate existence. The puffing of the ambitious No. 2 (Forney-type tanker) is forever silenced. The hills will no more echo to the clang of her musical bell or the warning toot of her cheery whistle.—JOSEPH E. SIEGEL, 7030 Bramble Ave., Cincinnati, O.

* * *

TWO-FOOT-GAGE roads interest me. Six years of research has revealed that at least 16 such lines have been built and operated in this country, 13 of them in Maine. They later were the Sandy River, the Franklin & Megantic, the Phillips & Rangeley, the Kingfield & Dead River, the Madrid, the Eustis, the Sandy River & Rangeley Lakes, the Wiscasset & Quebec, the Wiscasset, Waterville & Farmington, the Monson, the Kennebec Central, the Bridgton & Saco River, and the Bridgton & Harrison.

The Franklin, Somerset & Kennebec was *organized* in Maine but never operated. The Franklin & Somerset, the Anson & New Portland, the Mount Desert, the Moosehead, the Rangeley, and the Wiscasset & Waterville—all in Maine—were merely *proposed.*

The Mt. Gretna Narrow Gage was in Pennsylvania, the Billerica & Bedford in Massachusetts, and only one other that I know of was in North Carolina.—H. T. CRITTENDEN, 909 E. 26th St., Norfolk, Va.

* * *

LINWOOD MOODY'S comments on the little roads of Maine (*March issue*) interested me. My home was near Crawford Notch on the old Portland & Ogdensburg. When I was young I fired more than two years on the Maine Central, Knox & Lincoln Division, mostly for Engr. Ben Whitehouse on No. 147. I remember the hot doughnuts Mother Dickey used to bring out to us at Warren.—HARRY EASTMAN, 4131 Berenice Ave., Los Angeles.

Purely Personal

THIS letter is strictly confidential. Whatever you do, don't mention it to my wife or to Mr. Jack Wood of Danbury, Texas. It all started with an innocent hobby of mine—namely, chalking my trademark on the sides of freight cars. This decoration is seen by lots of people, many of them young women. One of the latter is Mrs. Jack Wood, who embroidered my trademark on several fine handkerchiefs and sent them along as a personal gift.

No, I never claimed to be a lady-killer, but I sure appreciate those hankies. My only hope is that Jack doesn't get wind of it and lay in wait for me with a shotgun, like we of the South do sometimes in cases of that kind.

Dear Jack, if you happen to read this, please note: I have never even met Mrs. Wood, and I am quite happy with my own wife. The hankies were purely platonic.—Bozo TEXINO (*Mo. P. hoghead*), Box 564, Laredo, Texas.

* * *

WE are two high-school girls, railroad fans. Recently we saw Bozo Texino's trademark in our town on R. I. boxcar No. 160393. This was the only car in sight at the time.—MARGARET PETERS, Orchard St., and MARY RAUERT, 19 Pratt St., Rocky Hill, Conn.

* * *

HINCKLEY fire story (*Jan. issue*) had a special appeal for me because I was living near the scene at the time. The Mora Lumber Co., of which I am now manager, was founded on the very day of that disaster, Sept. 1, '94.—K. H. WILLIAMS, Mora, Minn.

* * *

PHOTO of C. St. P. M. & O. Loco No. 601 (*March issue*) revived memories of a chilly night in Sept. '35 when I "blinded" the 601 from

St. Paul to Elroy, Wis., end of the Omaha line. She was pulling the *Chicago Limited*. After we left the yards the baggage man came out and asked me if I wanted to ride in the baggage car. "Sure thing!" I replied. I got into an empty N. P. baggage car, deadheading and sleeping my way.—HAL KAISER, General Delivery, Galesburg, Ill.

* * *

"ONE-MAN RAILROAD," by Tom Taber (*March '35*) told about a "pike" owned and occasionally operated by John Vaughn at Kingston, Pa., near Wilkes-Barre. Mr. Vaughn has since died and his two steam locomotives have been given away. One went to the Wyoming Valley Historical Society, Wilkes-Barre, and the other to Frank S. Mitten, Lehigh Valley division supt., for his estate at Bear Creek, Pa. —MICHAEL J. LAVELLE, 1478 Murray St., Forty Fort, Pa.

* * *

MY grandfather, Engr. Harry A. Norton, retired successor to Casey Jones, died suddenly while driving his car in Memphis last Feb. 3. He took Casey's run when Casey was killed in a wreck and held the same run for more than 30 years. None of the older engineers would take it because they thought it was too fast and too dangerous.

L. W. Baldwin, president of the Mo.P., sent a beautiful wreath for the funeral. Mr. Baldwin had been my grandfather's superintendent back in 1903. He was headed for the engine on the night of grandfather's big wreck south of Memphis; but someone called to him. The train pulled out and Baldwin had to ride in the coach. A few minutes later the engine ran into an open switch set by train wreckers. The engine turned over, killing the fireman and a hobo.

Father is a conductor on the Mo.P. and an uncle is on the D.&H. out of Whitehall, N. Y. I railroaded on the I.C. until ditched by the Depression.—HARRY NORTON COONLEY, 135 Arcadia Park, N., Lexington, Ky.

(EDITOR'S NOTE: *Engr. Norton had a long and interesting account of his experiences in this department, April '36.*)

* * *

FOUR riders dismounted and tied their horses to a hitching rack behind the station at Bowie, Ariz. When an Espee passenger train stopped, the engineer got down to oil 'round.

"Want to sell that thing?" asked one of the riders, who turned out to be "Curly" Bill, a notorious outlaw. Getting no answer, Curly repeated his question and thrust his forty-five against the engineer's belly and exclaimed: "I ast you a civil question. What's the answer?"

The engineer dropped his oilcan and raised his hands high. "I dassent sell it. Tain't mine."

"In that case," said Curly, "we'll borry it fer a spell." Sheathing his gun, he climbed into the cab, followed by his companions. They rode to and fro, tooting the whistle until the sport palled upon them, then got down and rode away.—LOIS H. PATTERSON, 3154 Pratt Blvd., Chicago.

FOR several years John Redding, of Ithaca, N. Y., engineer on the Lehigh Valley, had waved greetings and often tossed out newspapers or boxes of candy to Albert and Catherine Excell, who lived beside the track at Romulus, near Geneva, N. Y. The children had a collie dog, Scotty, which retrieved these gifts and brought them into the house.

One day Scotty slipped on the ice and fell under the engine wheels. Redding saw the accident, conferred with members of his crew; and a few days later he stopped his train in front of the Excell home and delivered to the children a small, playful, brown dog. It was the best he could do to make up for the loss of Scotty.—HARRY J. WOODWARD, Elmira, N. Y.

* * *

REFERENCE to horse-drawn freight cars on the Bowery in N. Y. City by one of your readers reminds me that I, too, saw those cars as a boy. They were not from St. John's Park, for that is on the West Side. They were hauled through 4th Ave. tunnel, now abandoned.—E. W. WEEKS, East Williston, N. Y.

* * *

WHILE I was in Germany in a unit of the American Army of Occupation in 1919, we were forbidden to fraternize with the Germans, and ordered to go armed at all times and never singly. Our regiment was located in Fortress Ehrenbreitstein dominating Coblenz.

One evening Buddy Eddie Farrell and I went to town to replenish our supply of beer. We were armed and looking for trouble, as per orders. While wrapping our purchases, the old store proprietor asked in English where we had come from.

"Watertown, N. Y.," I replied.

The old German beamed. "Many's the time I've run into Watertown on the old Rome, Watertown & Ogdensburg," he said. "I used to work for the New York Central." Opening his coat, he showed a familiar old blue vest with brass buttons lettered "N.Y.C."

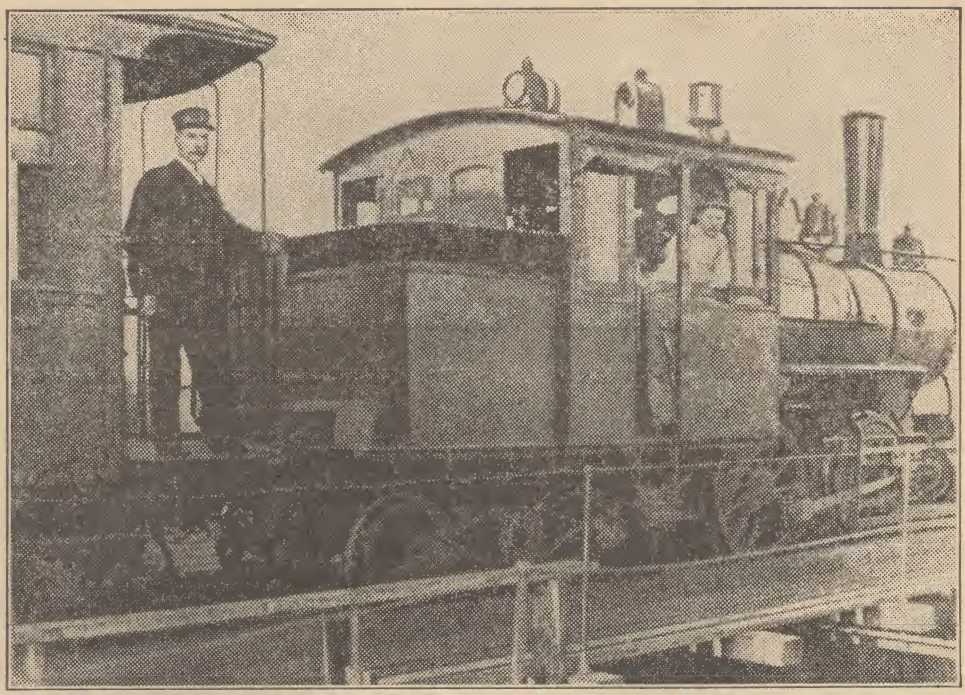
We warmed up; were invited to the back of the store to meet the family, and to dinner the following Sunday. The order against fraternizing just simply became a dead letter so far as we were concerned.—JACK LAING, Sports Dept., *Courier-Express*, Buffalo, N. Y.

* * *

DISAGREEING with the readers who say "Give us more fact articles," I appeal for additional fiction. Ask any book-dealer and he'll tell you there is a bigger demand for fiction. It is easier to read and more entertaining.—WM. W. WHITE, 24 Albion St., Belleville, Ont., Canada.

* * *

LOOKING out the window of his home, Don Gregg, highway engineer, saw the trucks of a car in a freight train jump the track and go bumping along the ties. He got into his automobile, chased the train, and stopped it. The train crew could not find a derailed car. Investigation showed, however, that a car actually had gone off the rail but had been rerailed at a switch at Norfolk, Neb.!—J. H. BRINK, Kearney, Neb.



Steam Engine on the Chicago "El." The Man in the Cab, George E. Taylor, of Freeport, Ill., Ran This Old Gal During the Chicago World's Fair in 1893. He Joined the Illinois Central in 1895 and Was Retired in 1928. (Photo from the I.C. Magazine)

Information Booth

APRIL issue asked: "Where are the famous old engines of North America kept today?" One of them (not mentioned in your list) stands back of the S.P. offices in El Paso. Beside it is a tablet stating: "Engine No. 1, E.P.&S.W., 1857-1909. First locomotive owned by the El Paso & Southwestern R.R., and the first to enter the city of Bisbee, Arizona."—M. J. Caso, Rockville, Conn.

* * *

SPEAKING of historic engines, the one involved in "The Wreck of the Old 97," about which the song was written, is still in use on th Southern, running between Marion, N. C., and Rock Hill, S. C.—E. F., N. C.

* * *

DOES any old-timer on the Burlington at Ottumwa, Ia., remember the new towerman who let the fast mail, westbound, pass the distant signal and then gave the R.I. freight the crossing? The mail went in the ditch for fair. Who recalls the date? My brother Charles was brakeman on the R.I. freight—Carl Deaton, Box X, Carlisle, Ia.

* * *

A MAN—I can't remember his name—who was driving a delivery wagon for the Oregon Lumber Co. in Baker, Ore., in 1905 or '6, had the railroad fever. My father, an engineer, took an interest in him, giving him information on engine operation. The man went to Spokane, and a few months later sent father a photo of a Mallet he was firing. He may have a passenger run by this time. I want to hear from him.—Cecil E. Wisdom, 4020 N. 38th St., Tacoma, Wash.

* * *

WHO can give information about Clyde Willows, Burlington switchman at Rock Island, Ill., 20 years ago?—D. F. Howe (*C.B.&Q. crossing flagman*), 902½ Maine St., Quincy, Ill.

* * *

I AM a railroad fan. My home adjoins New Haven right-of-way. Hotshot freights interest me. With my wire-haired terrier I greet them from the top of a cut. Will the engineers of 3556, 3213, 3552, 3557 or 3550 please write?—John M. Ulrich, Birchburg, Botsford, Conn.

* * *

WHO can give information about the Indiana Railroad or the Terre Haute, Indianapolis & Eastern Traction Co., now leased by the Indiana Railroad?—Quentin Stoeckel, Camp Eureka, Congerville, Ill.

* * *

WHERE is Mr. Kelley, who saved the life of a boy who had fallen off the *Golden Gate Limited* at Vaughn, N. M., in July '33? Mr. Kelley must have been in the S.P. maintenance of way dept., as he lived in a house car with

his wife on a siding near Vaughn.—JOSEPH E. CALLAHAN, 25 Folsom St., Dorchester, Mass.

* * *

WHO can tell the length of the trestle and of the bridge across the Ohio River between Evansville, Ind., and Henderson, Ky.? How many railroads, besides the I.C., employ engineers with long beards?—JAMES PATE, Jr., 518 E. Washington, St., Clinton, Ill.

* * *

I'D like to correspond with daughters of the rail. I make sketches in colors of trains and trolley cars in trade for other sketches or photos.—ROBERT JEFFRIES, 5069 Sangster Ave., Indianapolis.

* * *

BEST policy you have put forward is your proposal for a united organization of all railroad fans. It is a pity there should be so many petty jealousies. Is there a club in this city covering the entire railroad field? If so, I'd like to join.—FRED KIESEL, 3251 Hawthorne Blvd., St. Louis, Mo. (High School student.)

* * *

I HAVE a photo of a head-on collision between C.M.&St.P. passenger and gravel trains near Govedale, Ia. The engines were a 4-4-0 and a 4-6-0. Could any reader tell me the engine numbers and date of collision?

Also I want the numbers and types of two Rock Is. engines in a head-on collision near Jennings, Kan.

New Haven engine No. 764 was in collision with a double-headed freight. I want the number of the first engine of the double-header.

Also the numbers and types of three engines in a head-on collision of a passenger and double-headed freight at Renville, Minn., Nov. 11, 1925.

I have a photo of a wreck at Auburn, R. I., in 1905. I want to know the road, engine number and type.—MACK TOMME, Raymondville, Texas.

* * *

INFORMATION sought about my father, W. R. (Bill) Evans, Union Pacific brakeman on K.P. branch until 1915, then lived in San Francisco; not heard of since 1923.—MRS. J. A. (HELEN) GROW, 134 N. Congress St., Rushville, Ill.

IF Condr. George Keen (Pennsy) or Engr. Bill Fish (Big Four, C. & C. Division) or "Gumshoe" Bill Foster (Lake Shore bull at the Cleveland yards) or any old-timers on the P.&L.E. are alive and able to write, I want to hear from them.—FRANK X. RAUCH, Ward 8, Veterans Hospital, Walla Walla, Wash.

* * *

"STACKS," by Fred Jukes (*March issue*) reminded me that in 1893 or '95, while living in Manito, Ill., I used to see a little 4-4-0 with two stacks, on the C.P.&St.L., now defunct. Evidently she was not a success, for after a few months she was retired to the back shop, from which she emerged with only the usual number of stacks.—L. W. AMES, 2619 Second Ave., N., Great Falls, Mont.

* * *

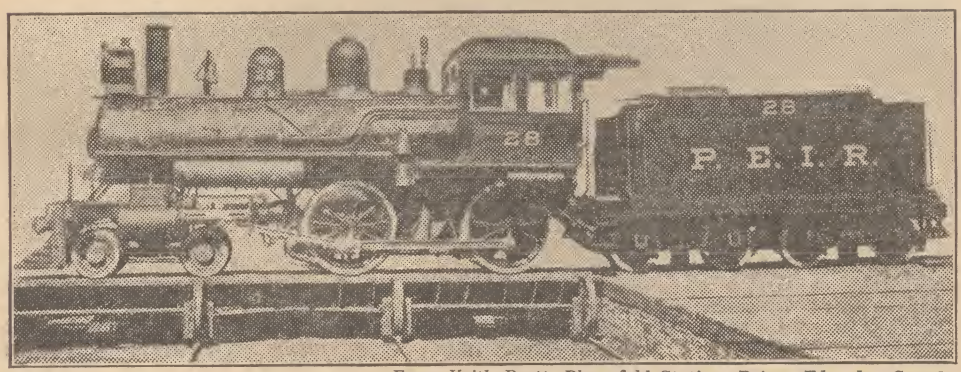
HOW many runs end at their starting point? Santa Fe train No. 101 on the Redlands branch, which is a loop, leaves San Bernardino in the morning and soon returns, as the mileage is not great.—R. L. CHILDS, 320 E. 24th St., Dubuque, Ia.

* * *

HAS anyone seen L.&N. hopper cars 182023 and 182313, caught in the flood at Cincinnati—JOHN H. TOMHATE, Box 115, New Bremen, O.

* * *

WITH all due respect for the claim put forward by Irwin Tobbell, of London, in behalf of the L.N.E.R. *Flying Scotsman* for a world's record for unbroken departure time for 73 years, except for an admitted interruption during war times, I still claim the honor for the 6.30 a.m. Geelong train of the Victorian Railways for 67 years from Spencer St. Station, Melbourne; for that record is without a break.—LESLIE G. POOLE, 20 Oak Grove, East Malvern, S.E. 5, Melbourne, Australia.



From Keith Pratt, Bloomfield Station, Prince Edw. Is., Canada

An Eight-Wheeler on the Prince Edward Island Ry. (Canadian National System)

BILL CLARK, 16-year-old railroad fan of Rochester, N. Y., used to think it was fun to hop freight trains. He doesn't any more.

Recently Bill found himself accidentally locked in a freight car at Rochester, and it was five days before he got out again. Those five days were terrifying.

"I pounded and hollered and screamed," he said, "but nobody heard me."

Finally trainmen in the Pennsy yards at Pittsburgh, Pa., found the boy in a state of collapse with feet frozen, weak from hunger and exposure, and sent him to the hospital. Bill is all right now, and cured of stealing rides. Many other cases did not end happily

* * *

ILLINOIS CENTRAL earned only a dollar on the shortest excursion in its history. The distance was three miles and there were ten excursionists, children from 6 to 15 years of age, none of whom had ever ridden on a train before. Teacher Marie Evans took her pupils from the rural school at Rogers, Ia., to Central City so they might ride back on the train. Condr. W. E. Sommers sure had a job punching all of those ten tickets. The excursion created a lot of good-will for the railroad.

* * *

AS AN Erie employe with a 25-year service record, although only 39 years old, I am a constant reader of RAILROAD STORIES and have been ever since you started in 1906 as RAILROAD MAN'S MAGAZINE. Your present book is far better than the old one in fact articles but not fiction. Aside from Dellinger's stories most of your recent fiction is trashy beyond words. The fact stuff alone makes RAILROAD STORIES an institution which no rail-minded man can afford to do without.—C. M. HOLLISTER, Special Claim Investigator, Erie R. R., Cleveland, O.

No Wonder He Didn't Sign His Name

I AM fed up on truck competition drivel. Formerly a brakeman. I used the railroad for shipping when I went into business for myself, receiving about seven cars and shipping about three weekly. Now my business goes by truck and I travel by bus and automobile, because the railroads have shown us that they don't want our business.

When shipping by rail, rough stock ordered on Monday was received Friday or Saturday. Trucks deliver next morning. That means I don't have to carry such heavy stocks. Fancy railroads requiring four or five days to bring orders 250 miles! Customers expect deliveries right away; not when the railroads feel like giving it to them.

Passenger conductors are mossbacks who can't get the idea out of their heads that passengers have to like their manners whether they want to or not. Some of them might learn a lot by taking a trip on a bus just to see how friendly bus employes are. Freight men ought to take a trip on a truck for lessons in service and politeness.

We had to hound railroad men into spotting cars. Railroad owners and employes don't seem to understand that they no longer have a monopoly. Railroads are 20 years behind the times. When they wake up I shall be first to go back to them.

A clerk from a railroad just called looking for a job. He was 35, had seen 12 years service, and had a wife and three children whom he was expected to support on $60 a month. Don't let anybody tell you about underpaid truck drivers!—RAILROAD FAN, Toronto, Canada.

A Section for Juice Fans

INSTEAD of reporting another trolley line abandoned I want to write about a trolley line *built*. Yes, built! It will be a two-mile spur connecting the Pittsburgh & Charleroi street-car line with South Park, Pa., costing $250,000. Part of this sum will be paid by the street-car company and part by the county for the relief of citizens who must walk long distances or—which is worse—ride in busses.—LOUIS KROAK, 412 Union Ave., Grove City, Pa.

* * *

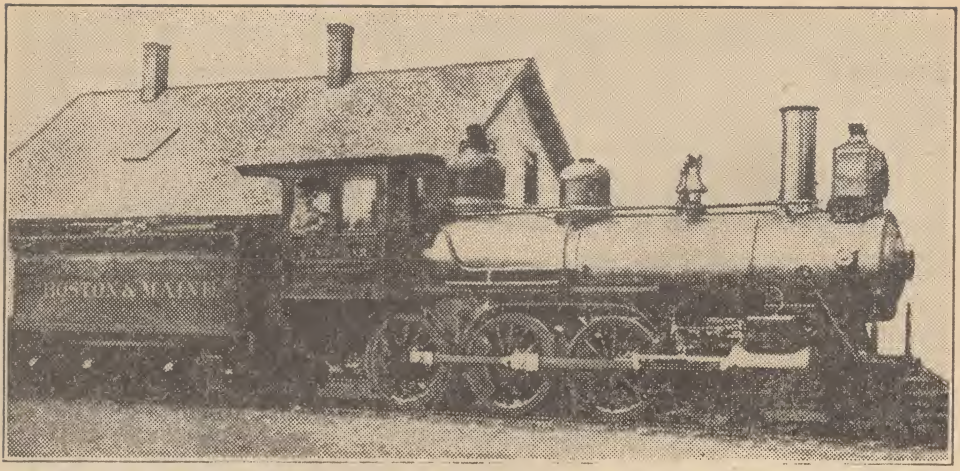
BACK in 1908 street railways were extending their lines out into the country. Most of them were single-track. Cars or trains were operated at reckless speed. Collisions were numerous, as officials and men knew too little about railroading. Still, they did a lot of business. Then Henry Ford produced a cheap automobile which ran such transportation off the roads.

Interurban lines of today are operated by high-speed steel cars on rock-ballasted roadbeds with block signals, interlocking plants, standard steam railroad rules, and written train orders. The general manager or superintendent is usually steam-road trained. Most of the motormen have discarded their street-railway uniforms; overalls and jumpers are now the style. Street-car methods, prejudices and customs have largely been discarded. The few interurbans left are becoming railroad-minded. —GEORGE W. BOOTH (*ex-motorman, engineer, fireman*), Box 141, Wheeler, Ore.

* * *

AFTER 49 years, service on the Eastern Mass. Street Railways in Salem was discontinued March 1. The same company also ended street-car service in Lynn on June 30. Busses are now used.—STACEY TUCKER, 332 Maple St., Lynn, Mass.

Introducing Louis H. Hertz, of New York City, Whose Collection of 700 or More Pieces of Historical "Tinplate" Railroad Equipment, All Different, Including Old Catalogs of Manufacturers, Is One of the Largest and Finest of Its Kind. Most of the Specimens Shown Here Are at Least 20 Years Old. One of Them (Middle of Fifth Shelf) Is a Begg Live Steamer Dating Back 40 or 50 Years. Hertz Is an Authority on Tinplate History and Supplied Some of the Facts for C. F. Carter's Article on Page 90 of This Issue



B.&M. No. 395, the "King Lear," Hauling Way Freight on the Concord Division (Now Part of the N. H. Div.). In the Cab You See Engr. John Canty, Now Living in Retirement at Claremont Jct., N. H., After 53 Years' Service. Photographed at Bradford, N. H., in 1892 by John E. Marshall, Whose Present Address Is Box 63, Henniker, N. H.

The Locomotive Whistle Language

BOSTON AND MAINE RAILROAD

"WHY do locomotives whistle when there is apparently nothing on the track?" is a question asked so often by the traveling public that the Boston & Maine has issued a statement to the newspapers explaining that "tootology" is really a language of its own, and this "language of the whistle" is used by practically all American railroads.

Each and every toot is a message, directed either at the general public or to some railroad man along the line. Strict rules forbid enginemen to sound a locomotive whistle unless for an urgent reason. Most persons know that two long and two short sounds mean: "Look out! This train is approaching a highway grade crossing."

In some cases even a blindfolded engineman could tell what state he was in by simply listening to a locomotive's crossing whistle. State laws are the reason for that. For instance, the rules in New Hampshire, Vermont, Maine, and New York require that the whistling be "prolonged or repeated" (commencing at a marker set at a place prescribed by law) "until the crossing is reached. In case of fast-moving trains, the whistle signal shall be prolonged until the engine is on the crossing; in case of slow-moving trains the crossing signal shall be repeated, the last blast of which is to be sounded as the engine goes on the crossing."

Now, that wouldn't do in Massachusetts, where the law prescribes: "engine bell to be rung from the whistling post to the crossing, and in addition, two long and two short whistles sounded just before reaching the crossing, the duration of the whistle to consume approximately ten seconds."

"Each whistle blast has a meaning all its own," any hogger will tell you; here is part of that language, using a dash for long toots and an "o" for short ones:

— ooo This train is about to stop. Flagman, go back and protect the rear of the train!

— — — — Flagman, return to train, from the west or south!

ooo (when the train is standing) This train is about to back.

ooo (when train is moving) We will stop at the next passenger station.

— oo We are calling attention to tower men and yard engine crews that this train is carrying signals indicating that another section is coming behind us.

oooooooooo (series of short toots) Warning to persons on tracks.

o — Crew of this train, look it over at once for leaking air or steam hose connections, or for sticking brakes.

— ooo — ooo We have seen a fire along the tracks in some house or building.

The last mentioned signal is repeated when the train passes the next section crew, tower, or railroad station, and railroad men immediately start to locate the fire.

International Engine Picture Club

FROM time to time we've been printing herein brief sketches of locomotive photographers and railroad hobbyists whose photos have appeared often in this magazine or who have developed noteworthy collections of one kind or another. Among others, we picked on Gerald Best of Beverly Hills, Calif., one of the more recent converts to the hobby.

Protesting that he was verily an amateur alongside the old-timers in the field, he finally did manage to send us a brief writeup of his career as an engine photographer. His interest in railroads, he points out, must have been born in him, for not only was one of his grandfathers (M. V. Heller) manager of the Port Jervis & Monticello (later part of the New York, Ontario & Western) from 1869 to 1886, but his other one put in 52 years with the Erie in various capacities. Mr. Best was born in Port Jervis, N. Y., a railroad town on the Erie, in the '90's, and he collected pictures of engines cut from magazines at an early age.

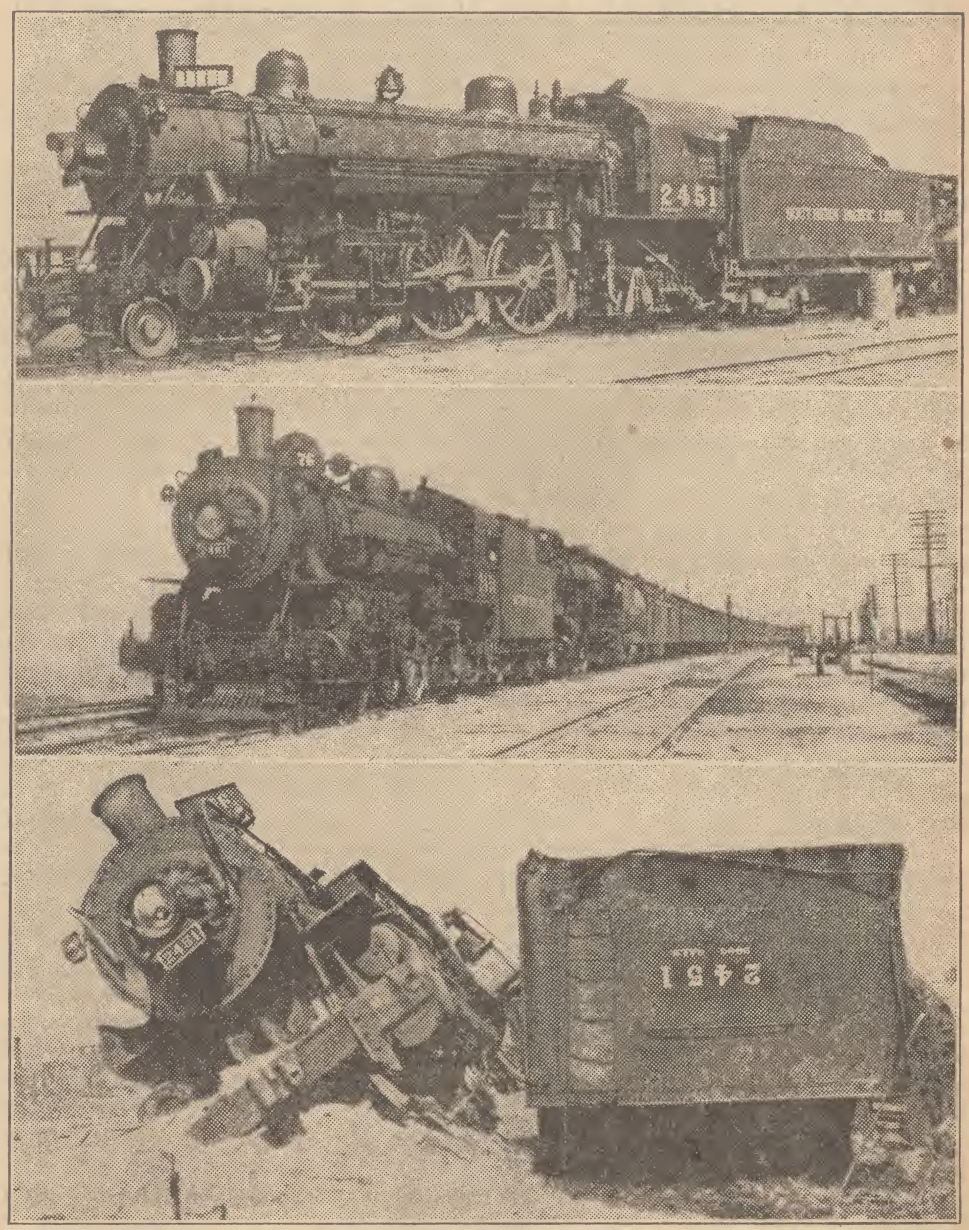
Not till 1931, however, did he pick up a copy of this magazine and decide to take advantage of the opportunity to combine his talents and his hobby. You see, he's a photographer for the Warner Brothers Studios, out in Hollywood, and what he doesn't know about cameras probably isn't worth knowing. So he made up for lost time, and now has a collection of more than 15,000 prints and 5,000 negatives. Using a 30-year-old Graflex, and doing his own developing and printing, he turns out pictures which are among the finest we've seen. He's especially interested in the narrow-gage lines of Colorado, and since his wife comes from Colorado, he's visited that state and ridden on the narrow-gage lines any number of times.

Gerald M. Best

But he doesn't confine himself to pictures. A special branch of his hobby is the extensive research he's made into the history of the aforementioned Port Jervis & Monticello, and now he's delving into the past of the Southern Pacific and its parent lines. He collects locomotive builders' plates, and he boasts 30 of them, all hanging on the walls of his study. To remind himself of his age, he also has the bell and headlight of S. P. No. 2221, a ten-wheeler built by Cooke the year he was born. Whenever he has time he works on or operates his 1-4-inch scale model railroad. He prizes very highly his collection of more than a thousand railroad passes dated between 1865 and 1890, left him by his grandfather Haller. And, of course, he's a member of the Railway & Locomotive Historical Society.

* * *

And now for a few brief notes on the subject of fan excursions. First of all, don't miss the chance to take part in the longest and swiftest one of its kind ever to be run—on Sunday, May 16th, to the Pennsy's Juniata Shops at Altoona, Pa. Arrangements are being made so that folks in Chicago, Washington and Baltimore, and intervening points, as well as New York City and Philadelphia, can assemble at Altoona that day to inspect the world's greatest railroad shops. Turn to page 47 for all details. In our next issue, incidentally, we'll report on the success of our big trip to the Schenectady plant of the American Locomotive Co. on April 11th, when 1500 folks saw the works.



How's This for the Complete Picture Story of a Wreck? The Top Photo Shows No. 2451, a Southern Pacific 4-6-2, Snapped by G. M. Best One Day in 1935. The Center One Shows the 2451, Together with the 4355 (4-8-2 Type), Hauling the "Lark," and It Was Taken by Mr. Best about the Middle of October, 1935, at a Crossing between Glendale and Burbank, Calif. On October 19th the Same Train, Pulled by the Same Engines, Hit a Truck of Sand at That Very Crossing with the Results Shown in the Bottom Photo. But Nobody Was Killed; and Although a Few Passengers Were Injured, None of the Crew Was

The first fan trip of any size this year, though, was the expedition sponsored by the Railroad Boosters last February 14th to the Santa Fe's San Bernardino shops, with Ass't Sup't Moore acting as guide. A side trip to Colton and a ride on the Pacific Electric to Riverside were also included in the day's activities.

Then, on March 7th, there was the excursion sponsored by the Westchester Model Club, from New York City to the Baldwin Locomotive Works at Eddystone, Pa., and to the Pennsylvania's shops in Wilmington, Del.—both objectives being made possible on the same trip by the courtesy of the Pennsy in stopping its trains, with extra cars attached, at Eddystone and the Wilmington plant. More than 150 fans went along.

First annual banquet of the Philadelphia Chapter of the National Ry. Historical Society, which was held in a dining-car in the Broad Street Station, was followed by a visit to the Pennsy's 44th St. roundhouse. So, you see, the Pennsy has done right by its fans.

Now, looking ahead again, we hear that on May 16th a group of Northern Ohio fans hope to make a little journey over the lines of the Stark Electric R.R. and Inter City Rapid Transit: leaving Alliance, Ohio, (Lake Park Shops) at 10 a. m., they'll ride through downtown Alliance, through Canton to Massilon and to Salem and back to Lake Park. Fare will depend upon the number of reservations; $2 apiece for 35 people, or only $1.45 apiece for 50. R. W. Richardson, 34 S. Union St., Akron, O., will supply further data (send a reply postal or stamped envelope).

We're also informed that tentative plans are being made by a bunch of St. Louis fans for an excursion over the Frisco to the Springfield, Mo., shops. Maybe it'll be held by the time this comes out, but in any event, if you live around there, you'll make no mistake by getting in touch with Arthur L. Anderson, 331 Marion Ave., Webster Groves, Mo., who wrote us about it.

READERS who collect, buy, sell, exchange, or make pictures of locomotives, trains, cars, etc., are listed here as members of the International Engine Picture Club. There are no fees, no dues. Names are published in good faith, without guarantee.

A membership button is given FREE to anyone who sends in a Reader's Choice coupon (page 143) and self-addressed stamped envelope. (If you live in Canada or any foreign land, enclose a loose 3c stamp from your own country instead of the envelope.)

If you don't want to clip the magazine, make your own Reader's Choice coupon.

Address Engine Picture Editor, Railroad Stories, 280 Broadway, New York City. Tell us what you want or what you offer. Unless you do so, your name will not be printed here.

And last, but not least, the California-Nevada R.R. Historical Society, about which we wrote last month, expects to hold a trip on the famous Nevada County Narrow Gage. Get in touch with Ralph Demoro, secretary, 915 Broadway, Oakland, Calif., if you're interested.

LAD G. AREND, 729 S. Front St., Franklin, Ohio, wants CC&L engines; has many old-timers, short lines and n.g. postcards.

E. ATWOOD, 834 Jackson St., Albany, Calif., wants Utah interurbans and Phoenix and Santa Barbara trolley views.

VERNON AXT, Box 462, Placerville, Calif., has 116 size pix of Nev. County N.G., Diamond & Caldor, Camino, P&LT, 10¢ ea., 3 for 25¢; also 116 size Calif. trolleys and inter. to trade for small and aband. elects. elsewhere.

* * *

C. BARR, 3021 Merwyn Ave., Pittsburgh, Pa., will pay 10¢ ea. for RR timetables; send list first.

ALBERT BERG, Jr., 1728 N. 16 St., Philadelphia, Pa., will buy or trade train orders, esp. B&O, PRR, M-K-T; also buys Tuckerton photos.

J. BORESKIE, 1040 4th St., Brandon, Man., Canada, has many CPR orders for sale or trade 7 for ea. 116 size pix, esp. SP, UP and streamliners. Sells pub. tts. and 490-page "Loco. Appliances" by Kirkman '02, slightly damaged, or will swap for engine prints; send offers.

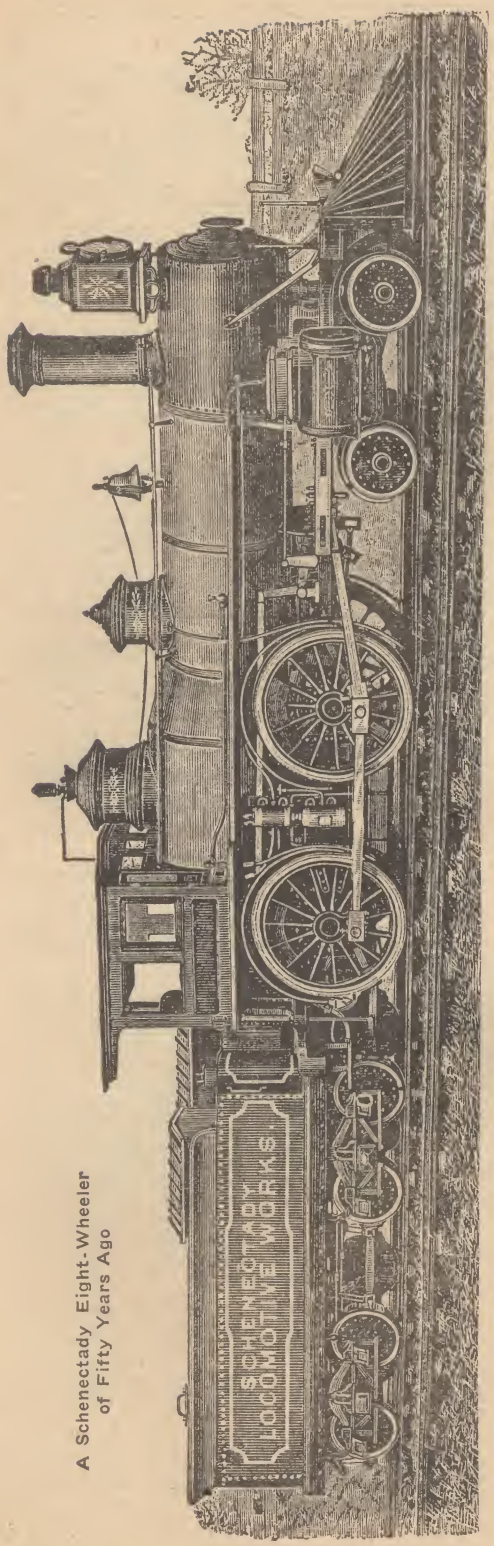
E. L. BRANSON, Box 55, Keokuk, Ia., has Railroad Stories '32 to date to trade for engine prints, or sell; also has many engine pix, incl. *Mark Twain Zephyr*.

RUSSELL BUCKHOUT, 11 Midland Ave., Glen Ridge, N. J., will send either silver or gold-plated watch or fob charm of 999 type loco, 1½" long, for $1 postpaid, guaranteed.

W. D. BUCKLEY, 13 Fairview Terrace, Maplewood, N. J., will buy DL&W pub. mainline tts. '35 & '36; write first.

* * *

J. B. CAIN, 1402 N. Bell Ave., Chicago, Ill., has Feb., May, June, July '11; April-July '12 Railroad Man's to trade for Dec. '29-Nov. '30; Jan.-Sept., Nov. '31; June, Aug. '32; Jan., Mar. '33; or will buy, write prices.



A Schenectady Eight-Wheeler of Fifty Years Ago

JOHN CANNON, 609 8th Ave. S. E., Minneapolis, Minn., has many 116 size N.W. roads, 35 for $1, plus 5x7 enlargement with each order; list and free sample for 3¢ stamp.

H. E. CHAPMAN, 153 S. Main St., Waterbury, Vt., has '33 PRR calendar, $1, or will trade for 116 size photos New England roads.

I. J. CHAPMAN, same address, offers 4-ohm telegraph instrument and manual for $4 or trade; first write.

R. B. CLARK, 406 W. Penn Ave., Urbana, Ill., has P&E, CCC&StL and few IC prints to swap for NYC.

S. B. CONDON, S. Penobscot, Me., will buy book, "RR Stories from McClure's."

JACK CRADDOCK, 130 S. E. 41 St., Oklahoma City, Okla., beginning collection of Santa Fe, Frisco and RI prints.

E. CUMMING, 3039 Bartlett St., Oakland, Calif., has 110 RR rimes to trade for engine pix; send offers.

* * *

H. DOBSON, 3300 W. 123rd St., Cleveland, O., has 2½x3½ prints of aband. CP&E inter., 35¢ ea.; also will trade '27-'30 movie mags. for Railroad Stories 2-yr. sub. & postage.

JOHN DOHERTY, Co. 116 C.C.C., Miller's Falls, Mass., interested in aband. and modern n.g. roads, esp. BRB&L old steam locos.

B. B. DOUGLAS, 1132 W. Hillsdale, Lansing, Mich., will sell collection of 1500 p.c. rail views, '06-'24; send offers.

A. F. DREDGE, Jr., 2880 James Ave. S., Minneapolis, Minn., has pix Milw. locos and *Zephyrs;* interested in PRR, NYC, Milw, C&NW and SP or UP Mountain-type locos.

G. R. DRIGGERS, McKenney, Va., has Railway Age, Brotherhood mags., SAL emp. tts. and orders, RR data, to trade for Dec. '29, Apr., Aug., Sept. '30, Feb., May-Aug. '31, Railroad Man's and 116 or 616 size locos; write first.

R. S. DUFOUR, 1509 Hearst Ave., Berkeley, Calif., will buy negs. and trade prints, esp. n.g. and large roads.

R. DUNLOP, 1644 S. 61st Court, Cicero, Ill., will send free transfers and a trolley photo for 3¢ stamp; also sells 120 size trolleys 5¢ ea.; wants old Chi. and Ill. transfers.

* * *

F. R. EMMERT, Philo, O., will buy '30 Loco. Cyclopedia.

SAM EPSTEIN, 1705 S. 2nd St., Phila., Pa., will trade trolley transfers.

* * *

C. E. FITZGERALD, SP RR San., Box 2031, Tucson, Ariz., will buy 116 size modern pass. and freight power NP, N&W, C&O, SP, FEC, C&NW, ACL, SAL, UP, Sante Fe, NYC, PRR, B&O, WP; send lists with prices.

WM. FLACK, Jr., R.F.D. 1, Tieton, Wash., will pay 10¢ ea. for negs. NP Class Q-5, Nos. 2226-2245; first write.

J. J. FLUHR, 106 2nd Ave., Garwood, N. J., will buy Jan., April., Oct., Dec., '34 and Aug. '35 Railroad Stories; send price.

WM. FOLLAS, 612 S. Hawley St., Toledo, O., buys pix old engines.

C. T. FREEMAN, 23 Fremont St., Bangor, Me., has MeC, B&Ar and other engines to sell or trade; also '34-'36 Railroad Stories.

A. J. FRIEDLANDER, 2708 Johnstone Place, Cincinnati, O., will buy emp. and old pub. tts.

G. FRYLING, 411 Market St., Sunbury, Pa., has p.c. negs. PRR Classes D-16sb, E-5s, H-8b, R (H-3b) and U (A-3) to trade, esp. for PRR Western classes, or sells.

H. H. FULTON, Lewis, Ia., offers packet 5 pix, 25¢, 11 for 50¢, all assorted.

* * *

H. F. GAENSSLEN, V.P., Beatcher-Gaensslen, Inc., 2357 Grandview Rd., Cleveland, O., is seeking unusual and dramatic 16 mm amateur films to use in human interest short features. Acceptable film will be copied and original film returned at rate of 40¢ per foot.

C. L. GERMANN, 447 65 St., Oakland, Calif., has 5x7 prints of '03 *20th Century Limited;* Santa Fe 1398, articulated Mallet pass. loco, with wood cars of '07; 25¢ per print.

B. GOLDBERG, 50 Lincoln Rd., Brooklyn, N. Y., has 116 pix B&O, LV, NYC, Sou, MoP, B&M, Nickel Plate, 5¢ ea., or trade for Pennsy.

E. L. GRIFFIN 512 N. Lee St., Valdosta, Ga., wants photos of Statenville and VM&W.

J. A. GROW, 134 N. Congress St., Rushville, Ill., has 116 size South Park n.g., Wab, MoP, IC, Moffat,

DL&NW and other west and midwest roads; also time cards, old passes, rule books, etc. Sample pix or t.c., and list-dime.

F. A. GUIDO, 502 N. Claremont St., San Mateo, Calif., collects prints and negs. small west roads; local fans write.

* * *

A. F. HAGER, 4177 Webster Ave., St. Louis Park, Minn., has few MN&S, M&StL and Milw 127 negs. to swap for GN negs.

H. N. HANSON, 229 N. Grove, Elgin, Ill., wants Railroad Stories '30-'33.

GRAHAME HARDY, 915 Broadway, Oakland, Calif., will pay $1 per copy for Oct. '22; Apr., Oct. '23; Jan., Apr., July '24 and Oct. '26 Baldwin Locos. Trades passes for Railroad Stories and RR books.

D. HARNISH, 225 W. 25th St., Los Angeles, Calif., has 116 size AA. D&TSL, GTW, GR&I, Santa Fe, MC, NYC, PM, PRR, SP, SD&A, UP, Wab, as well as over 100 traction companies, for sale or trade; negs. of some; list & sample 5¢.

E. HAUSER 30-46 48 St., Long Island City, N. Y., wants negs.; will trade LIRR and PRR pix for other roads.

E. K. HEATH, Box 15, Barre, Vt., wants to hear from Raymondville, Tex., fan who sent him 25¢.

IRVING HINZE, 301 W. Oak St., Chisholm, Minn., wants to buy or trade old ill. RR pamphlets or books, pref. on C&NW, WisC, Soo Line, CMStP, GN and NP.

F. C. HOFFMAN, 573 Lincoln Ave., Pottstown, Pa., wants to start rail club in Reading; local fans, write.

F. G. HOWARTH, 1504 Morton Ave., Ann Arbor, Mich., sells 120 size prints of Rhode Is., Conn, Phila., C&LE, Ind., and PE trolleys 5¢ ea. plus postage or trades for old tts. or SL&U and Bamberger Elec. inter. photos.

* * *

M. A. JARROW, 1317 E. 52nd St., Chicago, has taken over Chi. trolley collection of I.S. Glick and, in addition, has many other trolleys of Chi., NYC, etc., all 116 size; 6¢ ea., 12 for 50c, 30 for $1; 6c for list and sample.

B. N. JEWETT, Jr., 119 College Ave., Waterville, Me., will buy 116 or larger of former B&M locos 3000, 3008 and 3017; also any size MeC 505.

W. E. JONES, 405 E. 2nd St., Lima, O., starting collection old, obsolete tts. of operating and aband. roads before '26; will trade photos.

* * *

A. KAFARSKI, 3419 McLean Ave., Chicago, will pay 6 for 25¢ for 116 size prints of roundhouses, engine terminals, wrecking cranes and train scenes; also frt. and pass. cars.

E. L. KASEMAN, Wheelerville, Pa., will trade photos or pay cash for negs. and old RR mags.; write first.

WM. KATZMANN, 2393 Centre St., W. Roxbury, Mass. wants B&M, MeC, New Haven B&P B&A and B&Ar locos.

L. M. KELLEY 1513 Moyer Ave., Elkhart, Ind., has NYC, Burlington, PRR, IHBRR, IC, RI, Erie, CSS&SB and many others for sale; send 10¢ for p.c. size and list.

H. R. KINSTLER, Botkins, O., wants pix of old Shay type locos.

E. KREMKOW, 2125 McKinstry, Detroit, Mich., has aband. and modern inter. and trolleys, and Chi. El to trade for other U.S. or Can.

R. KUNTZ, Box 201, Norristown, Pa., will exchange snaps of locos and boxcars.

* * *

TED LAMBERT, Carrington Rd., New Plymouth, New Zealand, has N.Z. train orders (limited no.) to trade for snaps of heavy Amer. power, esp. NYC and Sante Fe 116 size, 2 snaps for 1 order.

W. H. LARSEN, 9 O'Shaughnessy St., Melbourne, E. 4, Australia, offers good clear print of line-up of 5 n.g. tanks used on Queenland sugarcane fields, 5x27½", $1; write first.

L. O. LARSON, Letcher, S. D., starting engine, train, RR scene pix collection, pref. 120 and 116 size; has 116 size *The Constitution* (Old Ironsides) to trade.

H. LAUGHLIN, 606 W. 5th St., Connersville, Ind., has Apr. '32 to date Railroad Stories; best offer takes lot.

Mrs. W. W. LEACH, 2423 College Ave., Ft. Worth, Texas, has '91 map of "The Santa Fe in Texas" and '88 map of Pan-Handle of Texas and DT&FtW. What offers?

J. A. LEEDAL, 7 Grove Ave., Frizinghall, Bradford, England, wants colored Ry. trademarks of all Amer. and S.A. roads.

HUGH LIGHTBODY, 118 Arthur St., Truro, N. S., Canada, offers 2x3 prints of what is said to be N. America's oldest loco still in service (see "Along the Iron Pike") at 10¢ ea.; U. S. coin or Canadian stamps.

JUST OUT

Amateur PHOTOGRAPHY for PLEASURE and PROFIT

New practical book makes it easy to get better pictures; professional results. Shows how to make portraits, illustrations, and useful pictorial articles that you can sell.

NEW WAYS IN PHOTOGRAPHY

Ideas for the Amateur

By Jacob Deschin **307 pages, $2.75**

Get better picture results under all kinds of conditions, and learn ways to use photography in money-making projects. A plain guide for serious amateurs. How to select and handle many interesting picture subjects, modern views, special effects. Scores of good ideas on bad-weather, night, and hard-to-get shots; on angle-view, child, nature, candid, color, tabletop, trick, and other types of photography. Full of practical methods; lighting, shooting, and developing hints; professional tips. See it 10 days subject to refund.

Shows How to Make Photographic—

- Lamp Shades
- Transparencies
- Greeting Cards
- Murals
- Portraits
- Illustrations, etc.

SEND THIS ON-APPROVAL COUPON

McGraw-Hill Book Co., Inc., 330 W, 42nd St., N.Y. C.

Send Deschin's New Ways in Photography for examination. I will pay postman $2.75, plus postage, on delivery, with understanding I may return book for refund in 10 days, if not satisfied.

Name .....

Address .....

City and State.....RS-6-37

Kidneys Need Oil?

Curb Night Disturbances This Safe Way

When the genito-urinary passages become inflamed, you may suffer from a burning sensation. Your sleep is broken. Backaches, pains and stiffness trouble you.

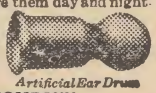
Santalwood oil is known the world over, for the help it brings to these inflamed passages. It relieves. It soothes. It cleanses. If you want to get the real East Indian santalwood oil in easy-to-take capsules, get SANTAL MIDY from your druggist. SANTAL MIDY is the most famous santalwood oil preparation.

Don't take cheap remedies for your kidneys and bladder. SANTAL MIDY capsules are what you want because they bring results.

NO JOKE TO BE DEAF

—Every deaf person knows that—

Mr. Way made himself hear his watch tick after being deaf for twenty-five years, with his Artificial Ear Drums. He wore them day and night. They stopped his head noises. They are invisible and comfortable, no wires or batteries. Write for TRUE STORY. Also booklet on Deafness.



Artificial Ear Drum

THE WAY COMPANY

726 Hofmann Bldg. Detroit, Michigan

LIQUOR HABIT

Send for FREE TRIAL of Noxalco, a guaranteed harmless home treatment. Can be given secretly in food or drink to anyone who drinks or craves Whiskey, Beer, Gin, Home Brew, Wine, Moonshine, etc. Your request for Free Trial brings trial supply by return mail and full $2.00 treatment which you may try under a 30 day refund guarantee. Try Noxalco at our risk. ARLEE CO. Dept. 204 BALTIMORE, MD.

Free 5x7 size photograph

Of Santa Fe 4-4-0 Diamond Stack Old Time engine, given with an order for a set of eight or twelve Santa Fe engine Photos.

Twelve 3x8 size Photos Listed below for $1.00		Eight 4x10 size Santa Fe Engine Photos for $1.00	
577	0-6-0	989	2-10-0
606	2-6-0	1654	2-10-2
697	4-6-0	5000	2-10-4
1251	4-6-2	1000	2-6 2
3450	4-6-4	1170	2-6-6-2
132	2-8-0	1301	4-4-6-2
4088	2-8-2	3745	4-8-2
4115	2-8-4	3000	2-10-10-2
1700	2-8-8-2		
3755	4-8-4		
507	4-4-2		
3800	2-10-2		

The above Twenty Santa Fe engine photos for $2.00 postpaid or either set for $1.00 and photo in 5x7 size of Santa Fe 4-4-0 Diamond Stack engine Free with each order.

HARRY H. SCHODDE
548 WEST MAIN STREET
EAST PALESTINE, OHIO

For Kidney And Bladder Trouble

Stop Getting Up Nights

Here's one good way to flush harmful waste from kidneys and stop bladder irritation that often causes scanty, burning and smarting passage. Ask your druggist for a 35-cent box of Gold Medal Haarlem Oil Capsules—a splendid safe and harmless diuretic and stimulant for weak kidneys and irritated bladder. Besides getting up nights, some symptoms of kidney trouble are backaches, puffy eyes, leg cramps, and moist palms, but be sure to get GOLD MEDAL—it's the genuine medicine for weak kidneys—right from Haarlem in Holland.

KEEP YOUR ENGINE PICTURE COLLECTION UP TO DATE WITH THE LATEST ENGINES BUILT

3 x 8 size—8 for $1.00

New Haven Streamline	4-6-4	No. 1400
Southern Pacific Streamline	4-8-4	No. 4410
Southern Pacific	4-8-8-2	No. 4159
Union Pacific	4-6-6-4	No. 3902
Northern Pacific	4-6-6-4	No. 5107
Reserved	2-10-4	No. 611
Union R. R.	0-10-2	No. 303
Alton and Southern	2-8-2	No. 15

Get Your Engine Picture Album Now!

If you want the neatest and most economical engine picture collection, send $1.50 today (no stamps) for our 25 page Album and a set of 8 Atlantic Coast Line photos. By filling Album you get fine collection of 200 photos.

Send 10c (no stamps) today for our latest catalog listing over 1,750 engine photos and train pictures. The list includes over 60 old-time and diamond-stack engines with historical sketches. Also complete list of over 250 train and engine photos which appeared in Baldwin Locomotive Magazine. Our usual list of foreign engines and a list of large-size photos for framing complete the catalog.

LOCOMOTIVE PHOTOGRAPH CO.
Box 6354 West Market St. Sta., Philadelphia, Pa.

A. A. LODER, Jr., 161 South St., Stamford, Conn., wants RR maps and tts.

RUDOLF LOOS, Geschwenda, Thuringia, Germany, offers 300 dif. colored prints of locos and trains, many countries, $2.25 postpaid.

R. L. LORE, 220 W. Glenwood St., Wildwood, N. J., will trade or buy 116 negs. from fans in or near Richmond and Norton, Va., Nashville, Tenn., or Savannah, Ga. Free print for early reply.

* * *

WM. MAIER, Jr., R.F.D. 3, Box 28A, Manchester, N. H., has 116 size photos of Man. trolleys, 10¢ ea., 3 for 25¢; send 25¢ for list, 2 samples, roster of eqpt. and transfers.

C. McEVOY, 10742 105 St., Edmonton, Alta., Canada, wants 116 size photos of CNR 6400's, 3800's, 6162 and Can. Atl. 618; write first.

A. E. MILLER, 3448 33rd Ave. S., Minneapolis, Minn., will buy old and recent copies of CstPM&O, C&NW annual reports, engine pix, tickets, passes, tts., orders, t.cs., vacation lit. of earlier days, clippings and C&NW Mags. of '21-'25.

D. MORRISON, 8933 Linwood Ave., Detroit, Mich., has many emp. t.cs. and few Official Guides to trade for foreign tts., or will sell cheap; send for list.

M. MUHA, 44 Walnut St., Metuchen, N. J., will develop and print any film, with 2 prints ea. neg., 25¢; 5x7 enlargements, 3 for 25¢, 8x10 enlargements 2 for 25¢.

T. MULRY, 638 Howe Ave., Shelton, Conn., has 120 size, colored or plain, of New Haven's *Comet* in action, and still and action of freight; also wrecks, 10¢ ea.

RUTH MURDOCH, 15 King St., Balmain, Sydney, N.S.W., Australia, will exchange British Colonial stamps, or will trade postcards, clippings, snaps, etc. for them.

* * *

W. NEWTON, 19 Pauling St., Winthrop, Mass., has 120 size B&M switchers and few BRB&L cars, wrecker and plows, to trade for photos or negs. of other n.gs.

E. J. OTT, 2708 Auchentoroly Terrace, Baltimore, Md., has 116 size prints Canton, M&Pa. D&TSL, MoP, DW&P, Des Moines Union, P&LE, B&O, others, 4¢ ea., or trade for small sou. or west. roads; send stamp for list.

* * *

R. H. PAYNE, 3321 Bevis Ave., Cincinnati, O., will sell or trade PRR, Big 4, B&O, C&O, N&W engine pix or negs.; send stamp for list, or 15¢ for 2 samples and list.

CARL PENNRICH, 2 Rue Kindermans, Brussels, Belgium, has many European engines to trade for N.A. engine photos, orders, lanterns, etc.

KEITH PRATT, Bloomfield Sta., P.E.I., Canada, wants record of "Billy Richardson's Last Ride."

W. F. PRIWER, Co. M, 11th Infantry, Ft. Benj. Harrison, Ind., wants 116 size pix of Tonopah & Tide., T&G and other Nev. short lines; also west. interurbans; send lists first.

* * *

M. E. RASMUSSEN, R. 2, Box 74, Drayton, N. D., trades pub. tts.

G. RICHARDSON, 8 Summit St., E. Orange, N. J., has Mar. '35 and Nov. '36 Official Guides to trade for 116 size pix; send bids.

HAROLD RIGOR, 1001 S. A St., Elwood, Ind., has 116 and 616 size photos for sale B&O, C&EI, NKP, NYC and PRR; send 5¢ for list, 10¢ for list & sample.

E. J. ROBERTS, 3903 S. Tyler St., Tacoma, Wash., will trade prints for city, state, college or h.s. pennants; pays up to 25¢ for 616 or 116 neg. GN 1506.

R. ROEDEMA, 58 N. 14th St., Hawthorne, N. J., will sell 50 p.c. and 50 116 size negs. $8; 3 large lithographed colored pix (24x24) NYC *20th Century Ltd.*; 30 Railway Ages, $3; 16 mm film old-timer *Empire State Express*, 17 ft. $2. Write first.

BUD ROSEN, 4845 N. Kedzie Ave., Chicago, has May, June, Apr. '36 Railway Age to swap for Loco. Eng. Journal before '35 or Baldwin Locos before '30; also 700 loco and train pix from RR mags.; write first.

WM. ROSSITER, 2405 W. National Ave., Milwaukee, Wis., wants May and July '33 Railroad Stories, and T&P snaps.

* * *

ROSS SCHAKEL, Agt.-Opr., CRI&P, Elkhart, Iowa, will trade RI train orders and engine pictures for stamps from foreign countries, air mail commemoratives, etc.

LAWRENCE SHEA, 4943 Western Ave., Westmount, Que., Canada, wants back Railway Age, Transit Journal, Railroad Stories before '33 and other transportation mags., in perfect condition.

JACK SHANNON, 82 Canning St., Launceston, Tasmania, Australia, wants to hear from other 'teen members.

A. P. SMELSER, Agent Santa Fe, Sun City, Kan.,

offers mounted 5x7 engine prints, 25¢ ea., framed 35¢; sample print and list, 15¢.

L. E. STALTER, Box 70, Park Ridge, N. J., will buy or trade 116 size prints Erie, B&M, Mt. Wash., WMd, Md&Pa for Jan. '32 and Sept. '33 Railroad Stories.

S. O. STEARNS, Stetson Hall, 2 Elmwood Ave., Winchester, Mass., wants May '32 and '33 Railroad Stories.

F. STECK, 415½ S. 7th St., Saginaw, Mich., wants to trade pub. tts.; also has complete file 116 size prints PM eqpt. to swap for other roads.

A. E. STENSVAD, 806 E. 6 St., N. Platte, Neb., will sell or trade UP pix, still or action, for Burlington, C&NW, NP, SP, NYC, B&O, Big 4, CMStP&P engines and wrecks; also sou. roads. Wants May '33 Railroad Stories.

F. C. STOES, R. 3, Box 490, Santa Cruz, Calif., has p.c. and 5x7 of new SP 4400 class streamliner; wants D&RG 1400 class 2-10-2, 1600 and 1500 4-8-2; also scenic train views any road.

N. SULLIVAN, Jr., 649 Canal St., Manchester, N. H., wants lists of western electric engines.

* * *

W. L. THOMPSON, Braddock, N. D., has 66 mags, to trade for RR photos, mags., books, esp. Ed. Hungerford's "The Modern RR."

G. TRUMPAITIS, 45 Harlem St., Worcester, Mass., has B&A, New Haven and NYC tts. and N. Y. subway transfers.

C. TUCKER, Jr., 224 N. W. 14th St., Oklahoma City, Okla., has 120 size M-K-T, Santa Fe, FS&W, RI, KO&G and Frisco locos to trade or sell.

* * *

E. UNDERWOOD, *U.S.S. Modoc*, Wilmington, N. C., wants Jan. '33 Railroad Stories.

E. L. VOGEL, 919 Schiller St., Louisville, Ky., interested in articulated loco prints.

* * *

H. J. WALHOUT, 304 Myrtle Ave., Muskegon, Mich., has 116 size pix and negs. PM, CNR, GTW, PRR, T&P and Frisco engines; send 3¢ stamp for list.

E. WARNER, 155 W. 188th St., Bronx, N. Y. City, specializes in NYC, PRR and New Haven; send list.

G. W. WATTS, 117 Main St., Clarksville, Tenn., has L&N 19 & 31 train orders, clearances and timecards to swap for others, esp. D&RGW, C&S, CV, KCS, New Haven, NJC, Soo Line, LV, PRR and NKP.

E. A. WEBB, 1705 Woodlawn Ave., Logansport, Ind., has 2½x4¼ photos 30 dif. roads, 10¢ ea., 5 for 25¢; also 4x6, 5x7, 8x10 prints; send 25¢ for 5 samples & list.

Rheumatism

Relieve Pain In Few Minutes

To relieve the torturing pain of Neuritis, Rheumatism, Neuralgia, Lumbago in few minutes, get **NURITO**, the Doctor's formula. No opiates, no narcotics. Does the work quickly—must relieve worst pain to your satisfaction in few minutes—or money back at Druggist's. Don't suffer. Get trustworthy **NURITO** on this guarantee. Don't wait.

RAILROAD STORIES
280 Broadway, New York City

Reader's Choice

Stories, features and departments I like best in the June issue are:

1.....

2.....

3.....

4.....

5.....

6.....

7.....

Name.....

Occupation.....

Address.....

OUCH—

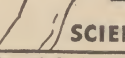
CORNS

come back Bigger, Uglier — unless removed Root* and All

●A corn goes deep. When you cut or pare it at home the root remains imbedded in the toe. Soon the corn comes back bigger, uglier—more painful—than ever.

Why suffer! Use the Blue-Jay double-action method. Pain stops instantly by removing the pressure. Then the entire corn lifts out Root and All.

Get a package of Blue-Jay today. 25¢ for a package of 6.



BLUE-JAY
BAUER & BLACK
SCIENTIFIC CORN PLASTERS

*A plug of dead cells root-like in form and position. If left may serve as focal point for renewed development.

Kidneys Must Clean Out Acids

The only way your body can clean out Acids and poisonous wastes from your blood is through 9 million tiny, delicate Kidney tubes or filters, but beware of cheap, drastic, irritating drugs. If functional Kidney or Bladder disorders make you suffer from Getting Up Nights, Nervousness, Leg Pains, Backache, Circles Under Eyes, Dizziness, Rheumatic Pains, Acidity, Burning, Smarting or Itching, don't take chances. Get the Doctor's guaranteed prescription called Cystex (Siss-Tex). Works fast, safe and sure. In 48 hours it must bring new vitality and is guaranteed to do the work in one week or money back on return of empty package. Cystex costs only 3c a dose at druggists and the guarantee protects you.

● INVENTORS ●

Do you feel you have a valuable invention? A novel invention may produce something salable if patented. Are you groping in the dark—getting nowhere? Learn how other men with inventions attained success. Write for our FREE Book, "Patent Guide for the Inventor" which tells you of fields where inventions bring profits if they are good patented ones.

CLARENCE A. O'BRIEN & HYMAN BERMAN
REGISTERED PATENT ATTORNEYS
669-D Adams Building Washington, D. C.

High School Course at Home

Many Finish in 2 Years

Go as rapidly as your time and abilities permit. Course equivalent to resident school work — prepares you for entrance to college. Standard H. S. texts supplied — Diploma. Credit for H. S. subjects already completed. Single subjects if desired. High school education is very important for advancement in business and industry and socially. Don't be handicapped all your life. Be a High School graduate. Start your training now. Free Bulletin on request. No obligation.

American School, Dept. HA-1, Drexel at 58th, Chicago

TIRE PRICES SLASHED

GOODYEAR·FIRESTONE
GOODRICH·U·S·

29x4.40-21 $1.75

28x4.75-19 2.05

AND OTHER STANDARD BRANDS

Biggest Tire Bargains in the World! Get Economy Reconditioned Tires for superior quality. Our Exclusive Scientific methods and expert workmanship insure **greater value**—more wearing miles per dollar. **Thousands of satisfied users everywhere.** We guarantee 12 months service or replace at half price. **Tires shipped unwrapped**—you see what you're getting! Reference: Merchants Bank, Kansas City. **Be Wise—Economize!**

GUARANTEE 12 MONTHS SERVICE or replace at half price.

BALLOON TIRES

Size Rim	Tire	Tube
29x4.40-21	$1.75	$0.83
29x4.50-20	1.95	.83
30x4.50-21	2.00	.83
28x4.75-19	2.05	.92
29x5.00-19	2.45	1.02
30x5.00-20	2.45	1.02
5.25-17	2.45	1.11
28x5.25-18	2.45	1.11
29x5.25-19	2.50	1.11
31x5.25-21	2.85	1.11
5.50-17	2.80	1.12
28x5.50-18	2.80	1.12
29x5.50-19	2.85	1.12
30x5.50-20	3.35	1.25
6.00-16	3.50	1.39
6.00-17	2.95	1.12
32x6.00-20	3.00	1.22
6.50-16	3.75	1.25
6.50-17	3.40	1.25
30x6.50-18	3.25	1.25
31x6.50-19	3.50	1.30
32x6.50-20	3.30	1.32
7.00-17	3.95	1.35
34x7.00-20	4.55	1.80

CORD TIRES

Size	Tire	Tube	Size	Tire	Tube
30x3	$1.75	$0.73	34x4	2.85	.82
30x3 1-2	1.75	.73	32x4 1-2	$2.95	$1.12
32x3 1-2	2.60	.82	33x4 1-2	2.95	1.12
31x4	2.60	.82	34x4 1-2	2.95	1.12
32x4	2.60	.82	33x5	3.35	1.40
33x4	2.60	.82	35x5	3.45	1.50

HEAVY DUTY TRUCK TIRES

Size	Tire	Tube	Size	Tire	Tube
34x5	$3.85	$1.95	34x7	$9.65	$3.20
30x5 8ply	5.25	1.90	36x8	10.45	3.90
32x6 8 ply	6.95	2.65	38x7	9.70	3.90
32x6 10 ply	7.95	2.65	40x8	12.35	4.05

TRUCK AND BUS BALLOONS

Size	Tire	Tube	Size	Tire	Tube
6.00x20	$3.10	$1.60	8.25x20	$7.45	$4.80
6.50x20	3.45	1.85	9.00x20	9.95	5.55
7.00x20	4.75	2.85	9.75x20	12.45	6.15
7.50x20	5.95	3.60	10.50x20	14.95	7.45

ALL OTHER SIZES — DEALERS WANTED

Send $1.00 deposit with each tire ordered. ($3.00 on each truck tire). Send Money Order or Cashiers Draft to insure quick shipment. Bal. C.O.D. **5% Discount** if you Send Cash in full with order. We may substitute brands of equal value if necessary. 12 months service or replace at one-half price. **All Tubes Guaranteed Brand New.**

ECONOMY TIRE & RUBBER COMPANY
Dept. M. C. 1615 Grand Avenue Kansas City, Mo.

THE SECRET MUSEUM OF MANKIND

Here is the World's Greatest Collection of Strange and Secret photographs. Here are the weirdest peoples who inhabit the face of the earth. See and read about their curious customs, their startling rites, their mysterious practices. Daring explorers have risked their lives to obtain these intimate photographs in the most inaccessible corners of the world. Contents include: Jungle Photos, Costume Photos. Torture Photos. Female Photos. Fetish Photos, etc. Send at once for the **FREE** illustrated brochure on the "Secret Museum of Mankind" with specimen photographs from Africa, Asia, Oceania, etc.

Metro Publications
Dept. 305—70 Fifth Ave.
NEW YORK

FREE ILLUSTRATED BROCHURE

NAME .....
ADDRESS .....

ACCOUNTING
the profession that pays

this book free!

Accountants command big income. Thousands needed. About 14,000 Certified Public Accountants in U. S. Many earn $3,000 to $20,000. We train you thoroughly at home in your spare time for C. P. A. examinations or executive accounting positions. Previous bookkeeping knowledge unnecessary—we prepare you from ground up. Our training is personally given by staff of experienced C. P. A.'s. Low cost—easy terms. Write now for valuable 64-page book, "Accountancy, the Profession That Pays," free.

LASALLE EXTENSION UNIVERSITY
The school that has trained over 1,550 C.P.A.'s
Dept. 676-H Chicago

Buys 116 negs. PRR, C&O, Sou, N&W, etc.; has PRR, Wab., 15¢ ea. 2 for 25¢.

L. D. WEBSTER, 2½ Frederick Ave., Cortland, N. Y., has emp. tts., passes, orders, Official Guides for sale, or trade for stamps or engine pix before '10.

R. WESTING, 5428 Odell St., St. Louis, Mo., has Jan. '34 to date Railroad Stories; highest bidder gets the lot. Will send pub. tts. around St. Louis for stamped, addressed envelope.

R. WHITE, Box 425, Pontiac, Mich., wants sharp negs. of *Empire State Express* at speed, CPR bridge over St. Mary's River, Falls View (trolley) bridge at Niagara Falls; will buy or trade 116 or 122 size negs.

HERBERT WILLIAMS, Jonesboro, Ind., has 4x6 Big 4 168 and PRR 9105, 15¢ ea.

JACK WILLIAMS, Jr., 525 W. Mass. Ave., Hawthorne, Calif., wishes to obtain an old loco bell; write first.

C. W. WILSCAM, 725 S. West St., Galesburg, Ill., collects Burlington photos; send lists first.

F. WOZNIAK, 134 Gladstone St., Winnipeg, Man., Canada, starting; wants lists; also Feb. '33 Railroad Stories.

R. B. WRIGHT, 2112 S. 10th St., Springfield, Ill., closing out collection of 4900 photos, no lists; 5¢ for small sizes, 10¢ for builders, or high offer takes lot.

Abandonments

Concho, San Sabo & Llano Valley, Miles to Paint Rock, Texas, 17 miles. Colorado & Southern, Idaho Springs to Silver Plume, 17 miles. New Haven, Harwich to Chatham, Mass., 8 miles. Frisco, Pettigrew to Fayette Jct., Ark., 41 miles. Southern, Vasper to LaFollette, Tenn., 10 miles. New Haven, about 23 miles of former Old Colony branch lines (Middleboro Station to Myricks Station; Greenbush to Kingston; Dighton to Somerset Jct.—all in Mass.). Birmingham & Southeastern, Union Springs to Milstead, 27 miles, and Tallassee to Eclectic, 14 miles. Rock Island, Pittsburgh to Ardmore, Okla., 96 miles, and N. Colgate to Colgate, Okla., 2 miles.

NEW WAYS IN PHOTOGRAPHY

THAT'S the title of a 307-page book recently published by Whittlesey House, New York City. The outstanding thing about it is that it covers the whole field, covers it fairly well, and yet is handled in such a way that no amateur has to feel it's too advanced or technical for him. Written by Jacob Deschin, editor of *Camera Angles* in the *Scientific American*, it contains information that many a professional might find worth reading. Though there's nothing in it that is specifically aimed at the photographer of locomotives, the discussions of general technique, particularly when it comes to printing and enlarging, are very useful. The chapter on transparencies, for example, ought to give a lot of fans ideas.

WHY LOCOS ARE CALLED "SHE"

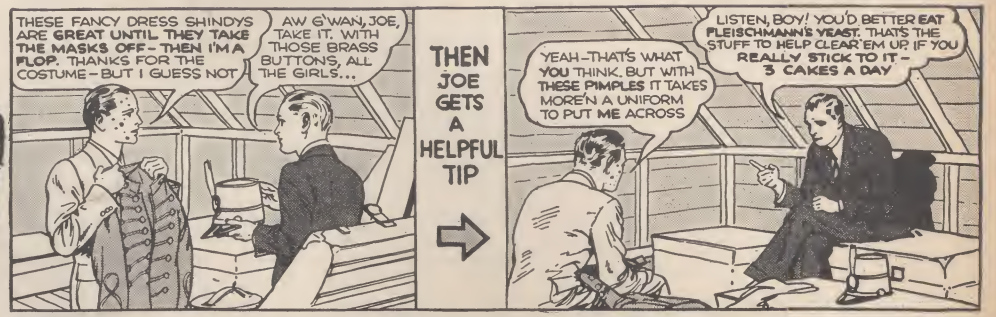
LOCOMOTIVES are called "she," according to the Kankakee (Ill.) "Star," because they wear jackets with yokes, pins, shields and stays. They have aprons and laps, too. Not only do they have shoes, but they have short pumps and even hose, while they drag trains behind them. They also attract attention with puffs and mufflers, and sometimes they refuse to work. At such times they need to be switched. They need guiding, require a man to feed them, and are much steadier when hooked up. Enginemen regard them affectionately.

SWELL NEWS!

ARTHUR MURRAY World's Greatest Dance Instructor— Tells you how to do the very Newest DANCE STEPS FREE!

IT COSTS $5 EACH PRIVATE LESSON TO LEARN THESE STEPS IN MR. MURRAY'S NEW YORK STUDIO

Start Now to Clear up Your Skin! Learn the New Steps! BE POPULAR



ASK YOUR GROCER FOR THIS FREE FLEISCHMANN DANCE CARD . . .

Don't slip up on this big chance, boys and girls! Begin today to save yeast labels for Arthur Murray's *exciting* book of 20 dance lessons!

You CAN'T BUY this book anywhere! The *only way* to get one is with Fleischmann Yeast labels.

Eat 3 cakes of Fleischmann's Yeast *daily* for 27 days. *Save the label from each cake.* Paste these on the *free* Fleischmann Dance Card your grocer will give you.

If your grocer has no Dance Cards, save your 81 yeast labels and send them in an envelope, or pasted up on plain paper.

Send your labels to Fleischmann's Yeast, 701 Washington St., New York City. And don't forget to include *your* name and address. (This offer holds good until August 31, 1937.)

(Details of securing Dance Book differ slightly in states west of Denver and in Canada, see newspapers, or ask your local grocer.)

"Keep eating it regularly," says Dr. R. E. Lee, well-known physician, "and **FLEISCHMANN'S YEAST** will help clear up **ADOLESCENT PIMPLES."**

● After the start of adolescence important glands develop, causing disturbances throughout the system. The skin gets oversensitive. Waste poisons in the blood irritate this sensitive skin. Pimples break through.

Fleischmann's Yeast helps to overcome adolescent pimples by clearing these skin irritants out of the blood. Eat 3 cakes daily—one about ½ hour before meals—plain, or in water.

Copyright, 1937, Standard Brands Incorporated

11,000 VOLTS

AL TAFFT works in a maze of high-voltage wires. Around him—11,000 volts lurk. A tense job that will test digestion if anything will! Here's Al's comment: "Sure! Working among high-voltage cables isn't calculated to help digestion. But mine doesn't give me trouble. I smoke Camels with my meals and after. Camels set me right!" Smoking Camels speeds up the flow of digestive fluids—*alkaline* fluids. Being mild, Camels are gentle to your throat.

Copyright, 1937, R. J. Reynolds Tobacco Company, Winston-Salem, N. C.

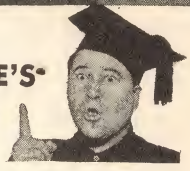
WELCOMES A "LIFT." "I have my hands full," remarks Mrs. Richard Hemingway. "When I'm tired, I smoke a Camel and get a grand 'lift' in energy."

COSTLIER TOBACCOS

Camels are made from finer, MORE EXPENSIVE TOBACCOS—Turkish and Domestic—than any other popular brand.

FOR DIGESTION'S SAKE... SMOKE CAMELS

HEAR JACK OAKIE'S COLLEGE



A gala show with "President" Jack Oakie in person. Fun and music by Hollywood comedians and singing stars! Tuesdays—8:30 pm E. S. T. (9:30 pm E.D.S.T.), 7:30 pm C.S.T., 6:30 pm M.S.T., 5:30 pm P.S.T., over WABC-Columbia Network.